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Editorial Notes Abroad.

No. XXX---NORFOLK AGRICULTURE.

In recurring to my memoranda about the Agricultural affairs of this noted county of Norfolk, it is proper to disclaim any effort toward an exhaustion of the subject, either in a few dashing sentences, or indeed with all the patient labor that I might, or would or could devote to it. The Royal Agricultural Society of England, in the pursuance of that policy which the Society of our own State has been imitating, as by degrees its funds have permitted —from time to time has offered valuable premiums for Reports upon the Agriculture of the several counties. That upon the Farming of Norfolk, awarded the sum of £50 about 16 years ago, is said to "fill more than 400 pages of a large octavo volume." The Society, indeed, appears in this instance to have really won a somewhat elephantine prize; the *Journal* would not contain it, and the bulky and all-devouring document was given over to the slow and inglorious death of separate publication.

During the interval between the day of the protracted Survey of Norfolk Agriculture just alluded to, and the present era of more hurried and less complete performances, there has not a little taken place to mark the period—short though it is—as one of interest and general progress. I owe my acknowledgments to CLARE SEWELL READ, Esq., for numerous illustrations of the changes that have occurred—many of them described in an Essay upon the subject then just furnished by him to the Society's Journal—upon which I shall rely as the source of most of the following facts; for the fame of the County, not less than the lessons which they may perhaps be made to convey, seem to me sufficient to warrant for their consideration, a longer pause than usual, at this point in our journeyings.

Let us then bear in mind that we are by no means entering the Garden of England, so far as natural advantages are concerned, however its present appearance and products might apparently justify such an appellation. But a small portion of its surface "can be considered a natural soil for wheat;" and yet we are met by the statistical fact that more than 200,000 acres—more than one-fifth of its total area under tillage—an area "including thin chalks, hungry gravels and blowing sands," produces an average crop throughout, of *thirty bushels and one peck per acre* of this grain. Speaking, then, of the county, as we should of one grand farm, and basing our statements upon the figures collected in 1854 by Sir John Walsham, as quoted by Mr. Read, we might roughly lay off this extensive establishment as consisting, one-fifth of permanent pasture, while the remaining four-fifths will apportion themselves nearly equally between the different divisions of that rotation which owes to the county its origin, its common name and its world-wide celebrity. In other words, could we summon some East-Anglian chieftain of ancient sovereignty, back from the quiet sleep of centuries to active dominion as of yore, over the twelve hundred and eighty thousand acres of Norfolk, how little would he recognize in what he saw, the primeval state of "cold obstruction" in which so much of it once lay at the mercy of every wind and wave, and which still characterizes about 275,000 acres—a lingering remnant too obstinate for the science and labor of our day, even, to subdue at a profit. He would see such oxen as were never roasted whole in the day of his glories, and such sheep as never furnished him a fleece, grazing over luxuriant herbage; he would find the four-field system in possession of fully its due proportion of wheat, having in turnips and similar crops another part, in barley and oats a third, and in artificial grasses the remainder. In glancing over the map of his much metamorphosized domain, however, and coming down from these generalities to a little more accurate acquaintance with what his successors are accomplishing, he would learn that the money-bringing crops are actually the ones that exceed their allotment of space in this rough estimate! He would see the farm employed

In Wheat,	203,000	acres.
Barley, 174,000; Oats, 35,000; Rye, 6,000,	215,000	do.
Turnips, 161,000; Mangolds, 16,000; Beans and Peas, 21,000; Vetches, 3,000,	201,000	do.
Clover and Artificial Grasses, 172,000; Bare fallow, 10,000; Carrots, Cabbages, &c., 9,000; Potatoes, 2,000,	193,000	do.
	812,000	do.
Which, with the permanent pasture,	193,000	do.
Gives the total area under Tillage,	1,005,000	do.

I doubt if the round numbers as above given, would not quite suffice to lay the ghost of our intrusive Saxon, in mercy to the repose of whose bones, wearied and worn in unsuccessful conflict with the invading and usurping Norman, let us forbear tracing the triumphs of the latter into all the intricate exactness of units and fractions.

The interesting statistics collected by Sir John Walsh-

Jno L Tappan

am cover the two years 1853 and 1854, and the value of such tables of agricultural facts, is argued from the proof afforded by these, that Norfolk was growing in 1854, 13,000 acres more of wheat, feeding nearly 10,000 more bullocks, and had 7,600 acres less lying idle in bare fallow, than during the preceding year. Many English farmers,—indeed all, I presume, of those more advanced in their cultivation and their views,—are strongly in favor of the adoption of some system of collecting thorough and complete Agricultural Statistics,—a measure which would be of great value and interest in American Agriculture, but which, there as here, finds numerous opponents of that class who think all "ignorance is bliss."

The table of Live Stock maintained in the County, shows one horse to rather less than 18 acres tillable land; almost one head of cattle to every 10 acres; 841,591 sheep to 1,005,135 acres, or not very far short of the ideal of the best English farming, "one sheep per acre," and about as many pigs as there are cattle. It is in thus examining the well attested results of English Agriculture upon large surfaces, that we ascertain really what it can and does accomplish; we are not talking of some "high farmer's" sayings and doings, but we are taking the average of the bad and good over a whole county.

To reduce the figures exactly to the standard of a one-hundred acre farm, in order that our farmers may thus judge upon a more familiar basis as to the allotment of the land and what it produces, we find that the scale of operations in Norfolk, if carried out similarly upon one hundred acres, would give us:

20.2	acres in wheat—30 bush. 1 pk. per acre,.....	611	bushels	wheat.
17.3	do. barley—38 bush. 2 pks. do.	664	do.	barley.
4.1	do. oats—46 bush.* per acre,.....	184	do.	oats.

So much for the grain produced. The proportion of bare fallow would be less than the land which lies waste in one spot and another, on the majority of hundred-acre farms with us, being only one acre and a very small fraction. We should then have

In roots, (exclusive of potatoes,).....	20.1	acres.
In cabbage, potatoes, &c., (includ'g bare fallow as above,)	2.0	"
In clover, lucern and artificial grasses,.....	17.1	"
In permanent pasture,.....	19.2	"
Total of the Farm, grain land and all, ...	100.0	"

And we should be keeping 5 horses, and a fraction large enough to cover a well grown 3 year old colt; 9 head of cattle and a calf or two; 9 or 10 pigs, and between 80 and 90 sheep. How does this compare with the results of what is called with us good farming? If it was not that the New-York census of 1855 is well known to have been taken in a peculiarly bad season, it would have been worth the while to place the figures of some one of our counties, side by side with the foregoing; but we do not wish for the sake of a contrast to represent our farming as any worse than the reality. In 1859, considered as it was the best year for wheat, 1816 alone excepted, within the memory of our farmers, the writer has heard the estimated average yield of Onondaga and perhaps also of Ontario and Seneca counties, placed by good judges at not far below 25 bushels per acre; these three counties have something more than three-fourths the area of improved land which Norfolk contains, and probably but about one-tenth of this area was in wheat, both winter and spring, in the one case, while in the other the proportion of wheat lands was fully twice as great.

Although we have extended these reflections at the risk of tediousness and repetition, as the auctioneer sometimes "dwells" upon his figures in the hope of exciting his hearers to enlarge their ideas a little, there is scarcely any way of bringing a fact home to practical realization that more completely accomplishes the purpose than statistical tables, if only a fair hearing can be had for them. Let us now inquire farther in regard to the general characteristics of Norfolk agriculture.

Charles II is said to have observed that "Norfolk should be cut into roads for all the rest of England." I do not know whether the remark was made out of compliment to the roads then existing in this county, or because he thought its light soil good for nothing else than to form a dry road-bed.

Coming into the County as I did, however, from Peterborough, through March, Wisbeach and Lynn Regis, the first that I saw of it, was that alluvial district, partaking more of the character of the Lincolnshire and Cambridgeshire fens, than resembling the more easterly portions of Norfolk. It was my good fortune to find a most obliging acquaintance and guide in the train that morning, who pointed out to me several "steamers," where this power is in use in pumping or otherwise promoting the drainage of the land. The soil, according to Mr. Read, is here mostly a layer of peat from 2 to 20 feet in thickness, resting fortunately upon a substratum of clay—fortunately because it is by *claying*, as well as by draining, that this peat can chiefly be rendered productive, some of it being so light that "on losing the water it blows away." Extraordinary dressings of clay, marl, chalk, and in some cases sand, have been applied, "from one to two and even three hundred loads per acre;" and it is rarely if ever considered possible to apply too much, because the more the peat is consolidated the better, and because any excess of lime, "which would be injurious on uplands," can expend itself here "in converting the superabundance of vegetable matter into fertilizing substances."

In reclaiming these fens some bad mistakes appear indeed to have been made. Draining the peat simply, is of no avail. Clay, marl or chalk, are necessary applications. Some of the peat that rests upon sand, so long as the water remains "within six inches of the surface," will produce a "rough sub-aquatic grass; take the water away and it grows nothing," and the channels made to drain it, have therefore been dammed up, but the money expended upon the process has not been so easily recovered. Indeed Mr. Read mentions the "prevalent idea that the fens are now drained too much," although he considers it well founded only in exceptional cases like the above. He also states that the "drainage was begun at the wrong end;" each proprietor was endeavoring to throw the water off from his own land, whereas if the mouth of the river Ouse "had been properly altered and deepened, thousands of acres that are now drained by steam, would have had fall enough for a natural drainage."

There is also in the southwest of Norfolk a "large tract of blowing sand," formerly "all rabbit-warren and sheep walk," and still described as poor and comparatively barren—of which I had a glimpse in returning from Norwich to London, after leaving Attleborough, and from Thetford to Brandon. Nevertheless, here as elsewhere the English farmer turns what he has to the best account; these out-lying sheep-walks are of importance to the holders of arable farms, affording "in certain favorble seasons, a great amount of hard but healthy herbage for the large

* Neither the soil or climate of Norfolk suits oats very well, and "the yield is insignificant," says Mr. READ, when compared with the averages of barley and wheat.

flocks which are the sheet anchor of the occupiers of these lands." Here the poppy, which I had seen so extensively blooming on the continent, is also a troublesome pest, in the wheat-fields particularly. By plowing the "ley" or grass land, early, and letting it lie for some time after a light rolling, the winter annuals get quite a start before the harrowing and heavy rolling take place to prepare the ground for wheat sowing. As early in the succeeding season as February, the field is well horse or hand hoed; the wheat, if buried, soon grows through its covering, while the poppy, which is as tender when young as it is tough in more advanced stages of its existence, is either pulled up or turned under, and after its eradication, together with the consolidation and manuring of the land, even a blowing sand produces fair crops of wheat, which is said to be less affected by dry seasons here than either barley or oats. Sainfoin is highly esteemed here—proving less likely to fail, or to suffer from drouth, than clover and other "seeds." Rye is sown largely for sheep feed, it is stated, I suppose to be eaten off before other grazing is ready; turnips follow advantageously, and are mainly fed to fatting sheep, while after the rye is used, "the sainfoin and other layers, with a run on some of the sheep walks," supply the wants of the breeding flock, and, when finally the lambs are weaned, they continue during the day to keep well on the heather, and at night are folded over the "ley ground for wheat."

The experiment has recently been made of planting belts of firs across these open sandy districts, to break the wind, and I judge from Mr. Read's remarks, quite successfully.

The best soil of Norfolk lies to the north-eastward of Norwich—a "free working loam of capital texture and great depth." There is also a strip of still stiffer loam running from the southeast to the middle portion of the county—not stubbornly stiff, however; requiring drainage, but with good management favorable both for sheep and for all the grains. The two improvements that have taken place here, Mr. Read observes, are a greater growth of roots, and better draining. Bush drains are of ancient date, and still somewhat in use, although pipe are now most common; the ordinary depth heretofore has been from 2 to 3 feet—"now the general depth is 3¼ feet, or from that to 4 feet."

To complete our glimpse at the Norfolk soils, we should not omit to mention the other marshy district that skirts the rivers Yare and Bure in the east, where windmills are largely used for draining, and where grass is the chief product. It will thus be seen that there is quite a variety of surface in this one county—that on which its most noted improvements have taken place, and which forms the most extensive and important part, I have reserved until after enumerating the others, for it is there that my time was chiefly spent, and of which I have therefore the most to say. One difference between it and the richer land in the north-east is, that it bears more forcing without producing straw instead of grain; indeed it is said that while the appearance of a field in the one will lead to an over-estimate of the crop, a stranger travelling in western Norfolk will often place his figures four bushels below the actual result obtained. "The general appearance of the country," says Mr. Caird, "is flat and unpicturesque to the eye of the tourist, though the experienced agriculturist will find much to admire in the large, open, well cultivated fields divided from each other by straight lines of closely trimmed thorn hedges, and tilled with garden-like precision and cleanliness." It is an "expensive style of agriculture," as Mr. Read calls it, that one finds here; and the soil, naturally weak, is of that kind "that if farmed badly, will ruin any man," but so long as those results with an account of which this chapter was commenced, are here accomplished, it is worth some time and study to look into the means that are employed to produce them.

The story of the improvements wrought out by Mr. Coke, afterwards the Earl of Leicester, has been so often told, that we shall not care to recount it here at length. Finding his tenants throwing up their leases at $1.25 per acre when he came into the estate, he was able finally to command a rental of $5 and $6. It became his object to secure the best of tenants, and through their enlightenment to develope the agricultural resources of his property, because he soon found it to require a degree of personal supervision which no one man could possibly bestow. At the Holkham sheep-shearings, he invited leading practical men to meet his tenants and himself in discussing his measures; it was found an essential pre-requisite that *more stock should be kept*, and to this natural source of increasing fertility was added the application upon the surface of the marl which was found to be underlying it almost everywhere. Then came Art, scattering rape-cake as a fertilizer for the wheat, introducing clover and artificial grasses, and thus enabling the farmer to keep better live stock, while at the same time enlarging his production of the cereals. The Devons and South Downs were accordingly brought into the county and the four-course or Norfolk system of husbandry was established.* The wise and far-sighted views of Mr. Coke not alone effected these immediate changes: but, by the liberality he showed his tenants, and the spirit of improvement he fostered among them, the future as well as the present was embraced within the sphere of his influence; and, although passed away from the scenes of his exertions, his example still survives, and is conducive of farther progress not only there, but wherever in other counties the better systems are supplanting the worse.

We shall resume hereafter the subject of Norfolk agriculture.

CULTURE OF CURRANTS.

I would be glad to see in your paper, a complete article on the cultivation of the currant. I got some plants from Toronto last fall, called White Grape and Red Cherry currants, and would like to know how to treat them, and what sort of soil is best for them. J. D. W. *Kingston, C. W.*

No fruit will more certainly grow under adverse treatment than the currant—or to use the quaint phrase of our facetious friend BROOKS of Wyoming county, which will "stand grief" better. Planted under the fence of a neglected and weedy garden, or enveloped in tall grass, and never pruned, currant bushes still continue to afford yearly crops. But these crops are very puny fruit—such as they are, however, they are better than the owners deserve, who ought to be willing to devote to them a small share of the cultivation which other crops receive. For no fruit is more improved under right management than the currant. We have known the berries to be increased at least ten to twelve times in size by pruning, manuring, and cultivation. The annexed cut is an exact representation of the size of common red currants grown on neglected

*In this summary I have followed the outline presented by Mr. Caird in his Notes on English Agriculture, already frequently referred to.

bushes, and on those under proper treatment. (Fig. 1.) Those new varieties, the Cherry currant, which grows five-eighths of an inch in diameter, and the White Grape, which is often an inch in diameter, when both are fairly treated, often greatly disappoint purchasers, who totally neglect them, when they become but little larger than other sorts.

Fig. 1.

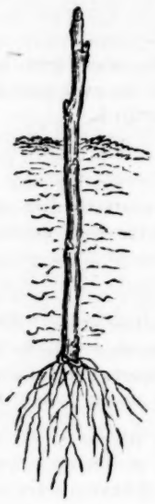


Fig. 2.

The currant is propagated by *cuttings*. A one year's shoot is taken, seven or eight inches long, cutting it off close to the old wood, and set about two-thirds of its length in the earth, which is closely packed about it. As roots are apt to be thrown out at each bud, all the lower ones are taken off. (Fig. 2.) It will make a good well-rooted plant by autumn. Scarce varieties may be layered at mid-summer, if growing rapidly, and will root the same season.

The bushes will grow in any good soil. It should be kept rich with frequent manuring. The ground must be kept clean and mellow, the same as for a cabbage or hill of potatoes. The best way, both for facilitating cultivation, and for neatness of appearance, is to allow but a single stem to grow at the surface of the ground, the branches spreading out into a regular head a few inches up. These branches should be kept thin by pruning, or at regular distances, so as to admit air and sun to the leaves and branches in every part. If the growth is allowed to become dense and thickly shaded, the fruit will be smaller, of inferior flavor, and less in quantity. As the branches become old, they should be cut out, and new and vigorous ones, which have been allowed to grow for this purpose, take their place—somewhat similar to the renewal pruning of the grape—but with this exception,—that while the grape bears on the present year's wood from last year's shoots, the currrant bears on shoots one year or more older; hence the renewal should not be so frequent. Some skill must be exercised, when shoots are left for new branches, to leave them on the lower parts of the bush, in such a position as to fill up regularly the future vacancies.

Bushes preserved, as here described, in the tree form, or with but a single stem at bottom, lose their vigor in a few years, and should be replaced by new plants, which will give larger fruit. But if allowed to grow in the bush form with several stems springing up from the earth together, they may be thinned out and pruned at the surface in such a manner as to afford a continued succession of new branches with roots, to take the place of the older portions as they are successively cut out. This, therefore, although not so perfect a mode as the tree form, is well adapted to ordinary culture, where it may prove inconvenient to make new plantings frequently. But successive pruning and good and enriching cultivation are especially necessary.

Varieties.—The common red and white currants, as we have already remarked, are capable of great improvement by pruning and cultivation. The *Red* and *White Dutch* are much like these, but the bunches are much longer, and they are consequently greatly preferred. The *Cherry Currant* is the largest red variety, (Fig. 3,) being

Fig. 3—Cherry Currant.

Fig. 4—White Grape Currant.

usually about half an inch in diameter under good culture, and five-eighths with the best management. It is a vigorous grower, and was formerly supposed to be a poor bearer, but this has proved to be a mistake. A row, thirty feet long, three years planted, bore last year one bushel of fruit. The *White Grape* is perhaps the largest white sort—being usually nearly half an inch in diameter. (Fig. 4.) It is not a very vigorous grower, and is of rather a spreading habit. The *Victoria*, a late, rather acid sort, has long bunches and red berrries; under good culture they are quite large, but if neglected, no larger than the common red currant. *Knight's Sweet Red*, is light red, and rather insipid but not sweet. *Prince Albert* is a rather new variety, a vigorous grower, fruit red, quite large, late in ripening, productive and valuable. The *Versaillaise* is a new sort, deep red, very large, next in size to the Cherry currant, and productive—but its merits are not yet established. The *Black Naples* is the largest of the black varieties, but its strong musky flavor is agreeable to but few.

Worms in Horses.—A correspondent of the Southern Cultivator recommends copperas as a remedy for worms in horses. He administers a tablespoonful, pulverized; in three or four days the dose is repeated; the horse is relieved of the worms at once—eats and thrives, and his hair becomes sleek.

Hay Required to keep a Horse.—A correspondent of the Wisconsin Farmer, who has given careful attention to the subject, says that five pounds of hay at a feed, or fifteen pounds per day, with twelve quarts of oat meal, or its equivalent in shorts, will keep a good sized horse in fine condition for all road or farm work, and is amply sufficient. Some will keep on considerably less; this, however, is a fair average.

[For the Country Gentleman and Cultivator.]

How to Make Farming Pay---III.

Another step towards rendering farming a paying business, was then, as it now is, the adoption and carrying out of a renovating system. My idea was, that if twenty tons of grain and straw were removed from a field, not less than that number of tons of good manure must be returned to it. To carry out this theory, my stables and barn-yard were so arranged and constructed, that no manure, either liquid or solid, was lost. The manure from the horse stalls, instead of being thrown out in a heap, where it would soon heat and become fire-fanged, was taken on a wheelbarrow from the stable and scattered about the yard under the open sheds. The manure from the cattle stalls was treated in the same manner. The liquid manure was, and now is, collected beneath the stable floor, and pumped into wooden conducters which carry it to any desired part of the sheds, where it is absorbed by the stable manure. This aids its decomposition and keeps it from being fire-fanged; and as it is all under shelter, there is no danger that the manure will be saturated with water, so as to make it unnecessarily heavy to haul out, nor will it lose any of its fertilizing qualities by leaching. When manure is exposed to the influences of the weather, where it can leach, the *best* part of it is always carried away first.

Another step in carrying out a renovating system is, to *consume* as much coarse grain as possible, in making beef and mutton. A farmer, in order to make farming pay well, must be a *consumer* as well as a producer. Point us to a farmer who does not consume, yearly, a good portion of his coarse grain in making beef and mutton, and of course does not make a good supply of barn-yard manure, and we will point out a system of management which will soon impoverish and ruin, for one generation, any good farm, unless a vast amount of foreign manure is applied to the soil. Every farmer should make his own manure as far as is practicable. It is a most ruinous policy to expend large sums, annually, for foreign manure or for any kind of fertilizers, when all the available substances of a farm are not wisely used up in making manure in some shape.

One of my first steps towards renovating my farm, when I commenced farming, was—and I have never abandoned it—to keep as many steers or bullocks during the winter as I could conveniently, so as to consume all the coarse fodder and coarse grain, ground into meal, that could be used up economically. Of course, my cattle have always been fed in stalls, and nothing is wasted. I always endeavor to have all their food palatable, and make them eat everything up clean. And while multitudes of farmers aim to keep their stock during the winter on the *least possible allowance*, my aim is to make them eat as much as I can, by feeding a variety of food *every day*.

It is by no means an economical way to consume fodder or grain of any kind, by feeding only *one* kind at a time. Some farmers confine their stock for a long time on cornstalks, for instance; and then keep them on hay for a number of weeks, and then switch off on to straw, or something else. Stock of all kinds experience a very great inconvenience many times, from such changes of food; just as a man would whose food for one month might be mush and molasses, and the next month nothing but wheat bread, and the next month bean broth, or beef soup, or nothing but potatoes, squash, or something else.

There is one very important consideration in feeding animals—and this is all intimately connected with my subject—which not one farmer in a hundred ever thought of, until it has been pointed out to him, which is, *mingling different kinds of food*, for the purpose of rendering a larger amount of the nutriment contained in them *assimilable*.

Suppose, for example, that a man were to subsist for one day on *beef*, the next day on *pork*, the next day on *beans*, and the next day on *wheat bread*. He will not feel as well, nor be able to labor as many hours each day, as he would if he should eat a portion of every kind of the food mentioned at each meal. Now, the true reason for the fact, is this: when only *one* kind of food is eaten at a meal, more or less of the nutriment is voided in the excrement, which, had it been brought in contact with other food during digestion, would have been *assimilated*, thus supplying the waste of the body or going to make fat.

So with feeding stock; if we grind together oats, rye, barley, and Indian corn, equal quantities of each, stock will derive much more nutriment from the meal thus mingled, than they will if each kind is fed *separately*. So with feeding all coarse fodder. I have always found that I can make my stock *eat more*, by feeding cornstalks, hay, and straw, when well mingled together, than they will eat when each kind is fed separately; and more nutriment will be assimilated when thus fed out, than if they are not mingled.

There will be much nutriment voided in the excrement, even when we exercise all possible economy in mingling and feeding the produce of the farm. Consequently, everything that has not been assimilated by animals should be carefully deposited in the soil, where it will build up a crop of grain or grass for the succeeding year. For this reason, all manure should be sheltered; and I am satisfied that it pays quite as well to protect manure as it does to protect stock. The better an animal is kept, the more valuable will be the manure, and the better it pays to protect it from the influences of the weather. The ordure of cattle, which consume several pounds of any kind of meal per day, will be worth twice as much as a fertilizer, as that is from very poor cattle, which are compelled to subsist on straw and fodder that is not very nutritious.

I have always considered raising stock one of the most important steps towards making farming pay. But when a man computes *appearances* in the matter, and is always influenced by what seems to be the *present cost* to produce a given result, his farm will soon become impoverished and ruined, and his stock will seem more like the "lean kine," spoken of by Moses, (Gen. 41:19,) than like the stock of a thriving farmer.

In the autumn of 1848, I had a lot of rather good steers, two years old, which I wished very much to dispose of for needed cash; but no one was willing to give me $25 per head for them. I had but little hay that season, and but a limited quantity of cornstalks. Every one who came into my barn and saw my fodder and the number of cattle, would shake his head, and say, if you keep all those cattle until spring on this quantity of fodder, I would like to see them, &c. One good old farmer, who now rests from earthly toil, when he saw how much each animal received, said: "It is a piece of consummate folly for you to feed your animals so much. You will never see half the value of what you feed." And then went on to tell how *he* kept *his* stock, &c., without feeding any meal or hay until towards spring. I kindly told him that if I could not make such an operation pay, I would have the satisfaction of doing *one* thing as it ought to be done. Now for the result.

Those steers received, night and morning, a bushel each of cut straw, cornstalks, and a little hay cut with it, and about two quarts per day of corn and oat-meal, mingled with the straw after wetting it. Towards spring the quantity of meal was increased to about four quarts per day. Each steer consumed about twelve bushels of meal, which would then have sold for about forty cents per bushel—say $5 worth of meal for each steer. I managed to have a field of early pasture, sufficiently large for the cattle to fill themselves, before most other people had even *thought* of having pasture. Each steer received as much meal for two weeks, when *in the pasture*, as he did before they were allowed to feed on grass. After they had run to grass two weeks, I received fifty dollars per head for them; and they made a large lot of excellent manure, which increased the grain crop of my farm full one-quarter *more* than there would have been *without* manure. I will not stop to foot up the account, to determine whether or not "it paid," for the data are before us. Fifty dollars per head was then thought to be an exhorbitant price for such steers. Such has ever been my system of management; and it has always seemed to pay so well, that I have followed it from year to year, and when distributing seventy-five cents

worth of meal among a few calves per day, or among any other stock, this question often arises, "*will it pay?*"

Experience always answers, that if a calf or steer be fed during the winter, five or six dollars worth of meal of several kinds of grain, in *addition* to the straw and other fodder which he eats, he will be worth in the spring, enough more to pay for the meal he has eaten, than he would have been without having eaten any meal. And besides this, the good effect of the meal will be seen in an animal until the next winter, just as the effect of manure on a field is seen from year to year.

A neighbor of mine spent a day with me, a few days since, who, seeing the meal, and cut straw, and turnips, which my cattle received, laughed heartily at me when I told him I fed everything regularly, three times per day, in order to induce them to eat *all they would.* Said he, my practice is directly the *reverse* of yours: "I endeavor to have my cattle live on *as little* as they can."

As this respected friend takes no agricultural paper, I have no hesitancy in penning what I replied to him—that such a system of feeding would never do *for me*, nor for any other farmer whose aim is to make farming a paying business. This esteemed friend scouts at everything which is published on agricultural subjects, and if a friend supplies him with the best of agricultural reading, gratuitously, he will not read it. But mark the difference.

He commenced farming on *new* land, and mine was *old*, impoverished land. *He* never believed it will pay "to make such a fuss about manure," nor to make animals eat all they will in winter, &c. Now, to sum it all up briefly, *he* complains that, "for some *unknown* reason," his crops of all kinds "*seem to be rather lighter* from year to year," while I *know* that my crops *increase* every season, and I shall be greatly disappointed, if my fields do not produce more the coming season than they ever did before.

S. Edwards Todd.

Tompkins Co., N. Y.

[For the Country Gentleman and Cultivator.]

DEEP PLOWING.

Messrs. Editors—Almost everything in this country seems to run into extremes—whether it is fashion or farming, politics or religion. The disposition of our people tends to be extravagant in all things, if they can get the means to become so. Some agricultural writers incline in the same direction, and would not a more "conservative" tone in many respects be more conducive to our prosperity? Many of our journals have for a long time rode hard the hobby of deep plowing—"plow deep" has been their motto, no matter what the soil may be—some recommending from 12 to 14 inches as the proper depth, while our famous "Professor" insists that three feet are little enough, but our farmers are generally cautious, and but few have been deluded into doing a thing that, on many farms, would be perfectly ruinous. I admit that on some soils a small portion of the subsoil plowed up and mixed with the surface soil may be beneficial—particularly if a large quantity of manure is added at the same time—and on bottom lands no injury can result; but I caution farmers to be careful how they turn up and intermix clay with the surface soil—it may do sometimes, but the contrary is the rule. You say—page 14, current vol. Cultivator—that "deep plowing is most beneficial to stiff clays, and, as a rule, we may plow deep when the subsoil is of the same character as the surface soil." I greatly question the first; the latter is no doubt true.

I know a farmer in this town, who had a lot of rich land near the sea, to which he thought too much sea-weed had been applied, and as deep plowing was so much recommended he would try it upon this lot. So he put in his plow and turned up a few inches of clay—the subsoil was a stiff clay. The effect was his land was that season like mortar, (as he expressed it;) he got no crop from it that season of any account, and but little the next, and I am informed it has not since produced as well as before. If the surface and subsoil are the same, as you say is sometimes the case, turning up the subsoil to a moderate extent may do; but if, as in this case, the surface is loam, and the subsoil pure cold clay, it is ruinous.

"Deep plowing and high manuring produce profitable results." Which, the plowing or the manuring? Try the manuring, with a depth of plowing suitable to the soil—not plowing up clay or yellow loam—and my word for it, it will be found the most profitable.

I know a farmer who is a large and successful grower of Indian corn, (his subsoil is a yellow loam, surface flat and free from stone,) who inststs that five inches is the proper depth to plow for that crop, and no deeper, and he says experience has taught him this. He certainly always raises extra good crops, which after all is the true test of good farming.

J. G. C.

[For the Country Gentleman and Cultivator.]

African Poultry--New Way of Raising Chickens.

Messrs. Editors—The amusement, delight and instruction, weekly derived from the well filled pages of my welcome visitor, the Country Gentleman, and the freedom which each one seems to have to its columns, induces me to offer to add my experience to that of others upon the subject of raising poultry—a subject associated, in my mind, with domestic quiet, and at all times fraught with many happy reflections.

My lot consists of two cocks and fifteen pullets, brought from the coast of Africa, in the early part of January, 1859. In color they are dark blue dominiques, with bright yellow legs and bill. In point of beauty I have rarely seen them equalled, and never surpassed. As layers and setters they are as good as any. On or about the 20th of March following their arrival, they commenced laying in a warm, dry, and above all clean house, made entirely of sassafras timber—(upon which, by the by, lice cannot, or at least will not, live.) The stables for my carriage and saddle horses were adjoining, so that an unlimited supply of worms and maggots was at hand, found in the manure. They had access at all times to troughs filled with corn, wheat and barley mixed. Confinement was unknown to them. Their range was over the cotton field and horse pasture of ten acres. Of one thing only were they deprived—their young. These in two or three days after being hatched, or as soon as they were strong enough, were given to a capon, for the reason that he can be made not only a better nurse, but that he would father or mother, as you please, any number of chicks of different ages. The hens too, soon forget their young and return to laying. One of my capons has had following him at the same time as many as a hundred and fifty, no twenty of which were of the same age. In fact, while some were large enough to broil, others had left their shells but a few days. The same fellow is now clucking to fifty, and will get as many more as soon as they are hatched.

Now for the result of the year. From 15 hens I raised 1,374 chickens—478 being males—470 of them soon found themselves capons, worth, at six months old, 50 cents each. Of the remaining 896 pullets, 150 wore kept, and the rest disposed of at an average price of 25 cents—making the handsome sum, not counting those kept for my own use, minus $40 00 for food, and $30.00 for attention, of $351.50. Many eggs, of course, were used for household purposes—the exact number I do not know. The pleasure of watching the growth and progress of these birds was worth treble the money. An overseer attending to the plantation, many hours of leisure were left me to devote to this small but pleasant experiment.

Shall I or not prepare myself to report the result of the coming year?

If a few of your correspondents would like to get them, so as to try them in a more northern climate, it would be a gratification to me to send several pair. In fact, as they are not raised for sale, but for pleasure alone, ten or twenty couples would be most willingly given, with the condition, however, that at the end of the year the results be made public through the Country Gentleman.

Wm. P. G.

Ridgeland, Washington Co., Miss.

Live and Dead Weight of Cattle.—Eight lbs. out of every 14 lbs., or four-sevenths of the whole live weight of sheep and cattle, represents, when the animal is properly fat, the net weight of the fore quarters, exclusive of offal—three-fourths of the live weight of pigs, if fat, represents the weight when dressed; but pigs have frequently been killed of which the offal was only one-fifth their live weight and even less.

Farm Improvement---III. Keeping Stock.

Improvement based on More Manure, and hence More Stock—Or rather, Better Kept Stock—The Coarse Grains should be Fed Out not Sold—John Johnston on High Feeding and its Results—Delafield on Reform in the Treatment of our Grass Lands—Seeding Down before Running Down—Top Dressing, etc.—Wintering Stock on Corn-Stalks—Stock Barns Wanted—The Lesson of the Scarcity of Fodder may be a Valuable One.

The Improvement of the Farm, as shown in our previous articles, depends to a great extent upon the amount of manure annually applied to the same, and we have already hinted that keeping stock presented the best means of cheaply securing efficient fertilizing material. It is our present purpose to offer a few thoughts on some of the best methods of increasing the forage product of the farm, and thus compassing the end desired—an increased capacity for stock-feeding—and hence an increase of manure and greater fertility and productiveness of the soil.

We must premise here, however, that an increase of stock is not, as a general thing, as necessary at first as an increase of feed and care. Were cattle and sheep fed higher on the majority of our farms, they would not only thrive more profitably, but would produce more and better manure, and thus help on the enrichment of the farm, and enable an increased number of animals to be kept on the same. As we have said before, we must feed out our coarse grains upon the farm if we would make them productive; it will not answer to starve our stock that we may have a little more corn, barley, oats, or roots to sell—we starve our land thereby, and reduce our means of making good and profitable crops from the same. "High feeding," says John Johnston, "will make higher manuring, both by making a larger quantity and a much better quality. * * It *pays*, thoroughly to feed young cattle and sheep, so that they are worth more at two years than an immense majority of the cattle in this State are worth at four years old. * * *Manure is the one thing needful*, after underdraining, for making *profitable farming*."

But to return to the ways and means of increasing the capacity of our farms for stock keeping. Years ago the late John Delafield, Esq., told the farmers of New-York that a *reform* must take place in their treatment of meadows and pastures, before they could breed or fatten cattle and sheep to the greatest advantage. It is equally true at the present day. In "seeding down" we are are often too sparing of grass seed—we delay the process too long, until our fields are too poor to give a "good catch" or product of grass—and we neglect to top-dress with plaster, ashes, etc., even when we know them to be largely beneficial. There must be a reform here. We must have our land in good tillage, and seed down while the field is still in good heart, with plenty of seed; and top-dress in all cases when it has been found to prove beneficial; then we shall get a full crop of grass for hay or pasture, and our acre of land so treated will bear double the stock, yea, quadruple which our common pastures now feed. And their fertility may be kept up by care in feeding off, neither unseasonably or unmercifully, and occasional applications of manure—fine compost applied early in the fall, and well harrowed, with another sprinkling of grass seeds.

We can winter more stock, without increasing the area of our meadows, if we give the latter good treatment, as above indicated, and thus increase their productiveness, by providing liberally of cornstalks as a substitute for hay in feeding cattle. Farmers are turning increased attention to the corn crop, as a means of keeping stock better and more cheaply than by depending on hay as largely as formerly. With a good supply of well-cured cornstalks and a portion of the grain grown upon the same, we can bring our cattle through the winter in good order without any recourse to the hay-mow. It is true, however, that it requires more labor to grow the corn than the hay; but it is also true that the increased value of the former will pay well for the greater labor necessary. It is true also, that to get the greatest benefit from feed of this character, the preparation of cutting and steaming is requisite, as well as the grinding of the grain; but stock may be well wintered, with a little more corn, without either of these processes.

We can winter stock most cheaply when supplied with good barns and sheds, with all the means and appliances for their shelter and comfort, and the preparation of their food, and all the conveniences for saving and composting manures; and some attention to these requisites is of prime importance. These subjects have already received considerable attention in this journal, so we will not extend our remarks in this connection.

The scarcity of winter fodder this season, has done much toward inculcating proper ideas of the economy and value of fodder, and if well pondered, will enable our farmers to keep more stock at a greater profit than heretofore. The real value and uses of straw, the policy of cutting and steaming coarse fodder, and the benefits of feeding grain and roots, willl be better understood and appreciated than they have been, and better provision will be made for husbanding every resource of this character and applying it to the best advantage. This will all tend to extend our Farm Improvements—and on the reliable basis of *more manure*, the advancement must be certain and permanent.

[For the Country Gentleman and Cultivator.]

CORN RAISING IN PENNSYLVANIA.

Messrs. L. Tucker & Son—The following statement of a crop of corn, raised in this neighborhood last year (1859,) was furnished to me at my request.

The crop was raised on land belonging to Mr. Samuel Isett, and the account kept by Mr. Gifford, his manager, not with the view of having it published, but in their regular business operations. I having heard of it, asked a copy of account to send you, so that a voice may be heard from the interior of the old Keystone State.

Corn Crop—Dr.

To interest on 38 acres @ $50 per acre @ 6 per c.,	$114 00
taxes on land,	18 00
35 days plowing, breaking up ground,	70 00
8 " harrowing, preparing ground,	16 00
6 " scoring and planting,	36 00
6 bushels seed corn,	4 00
29 days plowing corn,	58 50
39 " setting up and weeding corn, (by boys),	15 60
103 " husking corn,	92 70
Hauling corn from field	40 00
1 ton plaster and plastering corn,	12 00
Total,	$476 80

Contra.

By 2100 bushels corn, @ 50c. per bush.,	$1050 00	
10 loads fodder @ $3 per load,	30 00	$1080 00
Profit on crop,		$603 20

The corn was all cut off at the ground, and put up in shocks, as we call it—which will account for so much time required in husking. James M. Kinkead.

Blair Co., Pa., March 22, 1860.

Dutchess Co. Ag. Society.—Officers for the year 1860:

President—James Haviland, La Grange.

Vice-Presidents—Geo. W. Coffin, Amenia; Wm. W. Haxtun, Beekman; Thomas Doty, Clinton; Valentine H. Hallock, Dover; Edmond Stockholm, East Fishkill; Philip Vanderbilt, Fishkill; Wm. B. Dinsmore, Hyde Park; James Howard, La Grange; B. B. Brothwell, Milan; David Bryant, Northeast; William Akin, Pawling; Anth. Hoffman, Pine Plains; Geo. L. Dennis, Poughkeepsie; Ira Howland, Pleasant Valley; Abram Staats, Red Hook; C. S. Wainwright, Rhinebeck; Alfred Mosher, Stanford; George Duncan, Union Vale; Milton Ham, Washington.

Secretary—George Sweet, Washington.

Asst. Secretary—John U. Able, Union Vale.

Treasurer—John G. Halsted, Clinton.

Winter Farming in Albany County.

It is sometimes forgotten, in reading an outline of the practice of one farmer, that seldom if ever can it be regarded throughout as more than a general guide in the operations of others. And although every thoughtful reader desires to obtain all the details he can in such an outline, it is in order to study more thoroughly and comprehend more exactly the basis on which success has in one case been dependent, and the measures by which it has there been actually secured, rather than with any design or hope of putting himself in precisely a similar position, and working out again precisely the same results.

Thus the Calling of the Farmer, is eminently one that exacts mental exertion in the development of its resources. He can rarely walk advantageously in the exact footsteps of his neighbors. His best path toward the same ends may be very different from theirs, but their course is not the less instructive, if he learns from it the principles by which everywhere it is really guided, and the modifications, which, in other circumstances, their application requires. The skill of a good carpenter will last him under another sky: *cælum, non animum mutatur;* but it is a new study with the farmer in every new locality to which he goes, to adapt to his new condition the experience elsewhere gained, and the old laws that probably underlie the successful agriculture of every clime and kindred.

Now one of the prime lessons which we shall be inclined to draw from English Agriculture, if, before our "Foreign Notes" are drawn to a close, the opportunity offers of directing some attention to an examination of them —will be that our farmers should devote themselves more to the feeding of stock as an agent of improvement, whether it is or is not in addition a direct source of important profit.

Those who have thus far followed the accounts of English farming that have appeared from time to time in the correspondence of the COUNTRY GENTLEMAN, will have noted how all the results it accomplishes appear to hinge in some way upon this support; and farther examples may hereafter be given, illustrating with additional variations the correctness of that homely maxim which embodies in few words the results of long experience abroad, every day receiving new verification in the practice of our best farmers in this country, "No cattle, no dung; no dung, no corn."

Any system of stock-feeding moreover, which will tend in some degree to equalize the labors of the year by carrying into the idle months something of the over-burden of other seasons, is especially an object in our climate. And as an instance of *winter farming*, what has been said will prepare the way for a brief notice of the operations in sheep feeding of a reader in Albany county, Mr. JURIAN WINNE, of some of whose stock we have heretofore presented an engraving—operations which furnish another example of the truth of the maxim quoted. It may be well in addition to the remarks with which we commenced, to call attention, before proceeding any farther, to one other prefatory suggestion.

It has been objected to the practice of one of our most experienced contributors, that after all he only owes what success he has obtained to a peculiar *knack* in picking out cattle it will pay to feed, as if it was by no means a part of the farmer's regular business to acquire just this "knack" in judging of any kind of stock the farm produces or supports. What may be here and there a natural gift, might become far more generally a matter of acquisition. It is precisely in such points as these that farmers should endeavor to derive more benefit from our Agricultural Shows. And the managers of our Agricultural Colleges should not overlook the necessity of securing thoroughly qualified judges of live stock as assistants in the practical part of the instruction they are to convey. No one can attain success in this department of farming, except by skill in the selection of his stock as well as in the management of his resources, and new beginners should content themselves with an experiment at first upon a moderate scale.

It is five or six years since Mr. Winne first fed fifty sheep one winter; in 1858 he fattened some 200; about 330 in 1859, and this year he has carried the number to 500. He occupies a farm of a hundred acres, of which there are perhaps 75 under the plow. Of this there were in 1859 about

14 acres in oats,
7 acres in rye,
10 acres in corn, potatoes and buckwheat.
24 acres in meadow,
7 acres in pasture,

The product of the whole will probably be consumed by the stock—indeed most of it has been already—including 850 bushels of oats and 67 loads of hay. During the season there had been purchased 500 bushels of peas for feeding, and 100 bushels of buckwheat; also ten or twelve tons of oil cake, the latter costing him only $31 per ton, although seldom to be had, we believe, for less than $35 to $40. About half an acre each of carrots and mangolds, yielding some 1100 bushels altogether, had been grown. The rotation in common use is corn, potatoes, and buckwheat, followed the second year by oats, and the third grass, the land then continued under sod three or sometimes four years.

The stock on the place included two pair of horses, five head of cattle, and a store flock of two rams, seventeen ewes, four wethers and half a dozen lambs; besides thirteen ewes now away from home. During September and October Mr. Winne had also bought in the sheep for feeding, 507 in number, of which two head have been subsequently lost, leaving 505 as the present number in his feeding sheds.

The extent of accommodation which he finds necessary for sheep, may be inferred from the dimensions of one or two of these sheds. There is one for example 21 by 36 feet, with a narrow yard along the southern side 6 to 8 feet wide, where a lot of 75 sheep were thriving very nicely. A board on the north side near the bottom, is hung on hinges, and remains open for the admission of fresh air except during the most severe weather. The whole south side along the yard is open, but provided with two or three sliding boards to restrain the sheep under shelter when necessary. Others of the sheds have much larger yards, and others no yards at all. But Mr. Winne is careful in any case to provide amply for ventilation—for the admission and circulation of the atmosphere—a point justly considered of the greatest importance, while if it is sufficiently attended to, yards do not seem to be necessary—the sheep evidently thriving quite as well without them as with them. When yards are provided, however, the same amount of shed room will answer for a somewhat larger number of sheep. Seventy sheep were kept in a lean-to 20 by 46 feet, with no yard, ventilated by an open board along the side as before, and two trap-doors of considerable size in the roof, opening and shutting at will. This shed might have contained five more sheep without crowding; in that case allowing about 12½

superficial feet to each sheep, while in the shed with the narrow yard attached, 10 superficial feet under shelter had been quite enough.

To speak of the space allotted for a sheep, without saying anything of its *size*, is almost as definite, however, as it would be to talk of so many "pieces of chalk." And still we confess that it is not entirely without apprehension that we approach this necessary point. The weights of these sheep were all accurately taken down, one by one, partly upon the 3d of January last, and partly upon the 6th; a second weighing, with equal care, was made the 3d of February: so that we are not proceeding upon estimates or guess-work; although, knowing the incredulity with which a statement of the average was received by a dealer in New-York to whom it has since been made, we might perhaps hesitate to publish it except upon personal knowledge.

In January 504 of the sheep weighed 72,198 pounds aggregate, or an average of 143¼ pounds each. February 3, when the whole 507 were weighed, the aggregate was 76,273, showing an average of about 150½ pounds per head, or a gain in an interval of less than 30 days with more than half the number, and just a month with the remainder, of 7¼ pounds per head throughout. About six weeks had elapsed since the last weighing at the time of our visit, so that 10 pounds per head would be probably no more than a fair average gain in this interval; and 500 sheep, as even in size and condition, and as handsomely fatted as these, *averaging* 160 *pounds per head*, are really quite a sight to see.

The evenness of the lot was not such, nevertheless, as to render a dozen of the best unworthy of a paragraph by themselves. There were thirteen which showed an aggregate, Feb. 3, of 2,955 pounds, or an average of 227½ lbs. per head—the lightest turning the scale at 205, and the heaviest at 252.

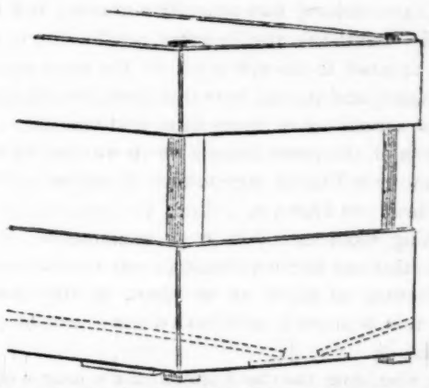
The sheep are Leicesters, and come from Canada, costing upon the farm, all expenses paid, a not extravagant price. Strongly in favor of grinding the grain fed to either cattle or horses, Mr. Winne does not think it either necessary or expedient with the sheep. Among the 500 head he distributes for the morning feed about eleven bushels of corn and oats in equal proportions, varying the amount slightly, according to the particular circumstances of the case, such as weather, &c. After this they are supplied with what hay they want, and subsequently with water. About 11 o'clock they get a supply of oat straw, which is this year very bright and nice, and relished by them as well as hay. At 1 o'clock two bushels of sliced roots per 100 sheep, are fed to them, and all their tubs and barrels are again supplied with water. The night food consists of 11 bushels for the whole, of peas and oil-meal, half-and-half. To contain their water, tar barrels are used, or if these fail, a little tar is put in with the water they drink. Salt is always accessible to them in one trough, and in another a mixture of two parts salt with one part ashes and a handful of rosin to two quarts of the above, with the addition sometimes of a little nitre.

With these precautions he has had remarkable success in maintaining the constant good health and thrift of the whole. The roots that are fed contribute to keep the system in order, rather than to add flesh, in Mr. W.'s opinion.

The manure remains undisturbed until spring, enough litter being added to keep the yards as well as sheds as completely dry as possible—a point not less important than ample ventilation. Last autumn thirty loads of leaves had been drawn and spread in the yards for this purpose, and are found to answer admirably. Straw is spread during the winter as necessary, generally twice a week, and Mr. Winne said that he would pay $5 per ton for it if necessary, sooner than have his yards wet. When the straw began to run low this spring, upwards of twenty loads more of leaves had been collected. He has also bought pine sawdust for the purpose, and likes it, and the chips, &c., as they accumulate, very much as a manure, upon heavy land.

There is also a bed of muck which he tried one year, putting it into the yards to the amount of 150 loads. As there are only about two weeks in the season when this deposit is readily accessible, it is not always convenient to take it out at that time, but Mr. W. expressed a high opinion of its value; he thinks it should be allowed to freeze and thaw through one winter, and become thoroughly dry in the summer before it is used under the sheep.

The feeding troughs in which the sheep receive all they eat, (except the salt,) are of simple construction, and possess some advantages worth a description.



Engraving showing End of Mr. Winne's Sheep-Trough.

The engraving shows the end of the trough, which is 22 inches wide. The lower board on the sides and ends is 12 inches wide, the upper board 8 inches. The length of the trough is 12 feet. The posts of timber 2 by 2½ inches, are six in number, one in each corner and one at the middle of each side. In making the bottom, three bits of boards are nailed across—one at each end and one at the middle; a 12 inch board rests upon them, where it is securely fastened, and then two other boards are put in upon a bevel, as shown by the dotted lines, which represent their ends in the cut. The lowest part of the bottom is thus the thickness of two boards from the floor, while the two inclined bottom boards are about 3 inches higher on the outer edge than at the other. Such a box as this accommodates 20 large sheep; it is tipped over and thus cleaned in a moment, without any sweeping, and has been thought by several sheep men who have examined it, to be a very simple and inexpensive way of combining all the essentials in this much discussed article of shed furniture. It is made with good long screws, and will stand wear and tear admirably; if made with nails, they become loosened by knocking about, and constant tinkering is necessary. The space between the two boards that constitute the sides, it should be added, is ten or eleven inches.

When the sheep are first bought in autumn, they are pastured a while before they go into the sheds, receiving a half bushel of corn or peas per 100 head daily while in the field. If pasture is hired for them, the current rate has been about $12 per 100 head per month.

The land upon the farm is mostly a pretty heavy clay, but if well worked and kept dry becomes friable; one experiment in draining has been made with the best results, and Mr. W. proposes to drain a larger area the coming season. He likes to plow as soon as the oats are off, and goes to a depth of seven or eight inches. The ground then lies till the 1st to 10th Sept., according to season, when the manure is brought out and spread; it is turned in with a Share's Coulter Harrow about two inches, the rye sown and dragged in lightly, and then timothy seed, succeeded by another dragging. About the last of the next March or first of April, clover is sown. He likes to seed tolerably thickly; one field of about six acres, for instance, receiving in autumn a bushel and a half of timothy, and in spring a mixture of about a bushel and a peck —one-third timothy and two-thirds clover. No matter how high its price, true economy teaches him to buy uniformly the best and cleanest seed.

With the 330 sheep fed a year ago, there was, as might be supposed, a considerable quantity of manure provided, and an opportunity offering for purchase in addition, Mr. W. bought 150 loads, at a dollar per cord, which he deemed a very good bargain. The manure in the yards is heaped under the sheds as soon as the sheep go, and there protected from exposure. It will need turning to prevent fire-fanging, unless wetted from time to time, and for this purpose a cistern has been provided for the reception of liquid manure, and a force pump by which it is thrown over the heaps from time to time, before they are finally drawn out for use.

Such operations going on upon any farm for a few years cannot fail to be felt in enlarging its productiveness, while in addition since Mr. Winne has been engaged in feeding, prices have been such as to pay a good pecuniary profit. The markets scarcely promise returns as large this year, although we doubt if the produce of the farm could have been put to any other use so remunerating. A letter received from JOHN JOHNSTON, while these notes were in course of preparation, says: "Cattle won't pay for feeding this winter, unless they advance materially from present prices; in fact they must meet with a serious loss who have been selling of late, and what is worse, I fear the drovers have also been losing. Sheep generally must have paid for feeding; the high price of pulled wool has kept up the price of sheep. I seldom or never sold sheep higher per pound than this spring, but I fed higher and they cost me high; still they pay for what they have consumed, and I always allow the manure made by them to be worth a dollar per sheep."

A favorite food with Mr. Winne for horses, is rye and oats ground together in equal proportions, and mixed with cut hay wetted; it fits a horse for work, he says, better than anything else, and he believes four bushels of grain ground to be fully equal to five whole. As above stated, he also grinds and cuts the feed of cattle or pigs, but never for sheep—giving them straw and hay, as well as grain, in its natural bulk.

A HINT.—It would be worth more than the price of your valuable paper, to many, to have their attention called to the fact that to pitch manure containing long straw or cornstalks, they will save much time and hard labor by cutting the heap of manure with a hay-knife, in the same way that we cut a cheese of pomace at a cider mill. This treatment does away with the objection to cornstalks in the manure heap—consequently to that of feeding them in the barn. P. P. PECKHAM.

Bradford Co., Pa.

[For the Country Gentleman and Cultivator.]

VERTIGO IN HORSES.

MESSRS. EDITORS—A friend called my attention to an article in the "COUNTRY GENTLEMAN" of Jan. 26th, viz., "Vertigo in Horses." The description given by "A Subscriber," corresponds entirely with a disease that prevails among horses in this vicinity, and for want of a better name, is denominated "Chest Staggers," but "Vertigo" is its real classification. The cause is a fermentation of food in the stomach, and the effect upon the animal very similar to that which is produced upon "bipeds" under like conditions of liver, stomach, &c., and the remedies to be employed the same. A dyspeptic man cannot eat Indian meal in any form—with impunity, neither can a dyspeptic horse—and whether it be raw or cooked, matters not in either case, inasmuch as the digestive agents in both cases are repelled by it—consequently fermentation follows, and cholic, vertigo, debility, &c., &c., are developed. I was once a confirmed dyspeptic, and after exhausting almost every resource for relief, finally became my own physician, and for twenty years have enjoyed uninterrupted health, partaken of my full share of "*good things*," and now stand firm in my boots, strong, 190 lbs. in bulk. I had a horse in same condition as the one described by "A Subscriber"—called in the aid of a veterinary humbug—eminent in his profession, who pronounced it an incurable case of "chest staggers," assuring me that a horse once affected could never be cured; he would, however, try, and if in a few days there was no improvement apparent, I had better have him knocked on the head. No improvement was manifest—$10 out for *science*—and a horse I valued highly, pronounced fit only for use as a fertilizing agent.

I took the animal under my own special charge, watched every symptom, and thought he wanted to tell me that he felt just as I did when I was a dyspeptic, when I could not describe my own sensations. On examination I found his feet were cold—(mine were just so,)—his ears were cold, (so were mine,) his breath was sour, (mine the same,) his heart seemed to palpitate with undue force at one moment, and at the next was scarcely to be felt, (I had had the same,) and his breath did not inflate the lungs sufficiently to swell out the body as it ought, (I had the same experience,) and I determined in my own mind that my horse was living the same kind of death that I had risen from. I treated him for dyspepsia—cured him in three months—and for four years a healthier animal has not lived in Massachusetts, and since his case, have aided in restoring a dozen others to health that were similarly diseased. Now for the treatment—but first let me refer to the character of food he had been kept on. He came to me, green from Vermont, where hay (and but an occasional feed of oats) was his ration. I placed him on cut feed, (hay and corn meal mash,) which he had a glorious appetite for, and on which for a year he seemed to thrive, although worked hard. Towards the close of his first year of *civilized life*, I noticed a degree of languor at times that was so entirely inconsistent with his ordinary elasticity of spirit, that I was apprehensive that all was not well with him. This was followed by the development described by your correspondent, and I refer to it as an incident in the association of cause and effect—but to the remedy. I cooked his hay by steaming, and instead of corn meal used fine feed—one quart to each feed of mash with twenty of the little Belladonna pills of Homœopathists, three times a day for three days, giving him water but once in twenty-four hours, and that late in the evening. I followed this with cut hay and fine feed (one quart at each feed three times per day,) and added a teaspoon of mustard seed for one week, then substituted ground oats with same quantity of mustard seed for fine feed in the mash for a week, all this time barely exercising him around the house. I then put him to his work, using double quantity of ground oats, viz.: two quarts to each feed, and from that time forward to the present, he has not lost an hour from his work on account of sickness, and weighs nearly 1400 lbs.; in fact, is esteemed one of the best working horses in the State. R. F. K.

[For the Country Gentleman and Cultivator.]

BALLOON FRAMES—III.

The Balloon Frame is one of those innovations, which, like the sewing machine, the husking machine, and the apple-parer, is destined to put an end to those social gatherings, which, in by-gone days, assembled to accomplish by united efforts that which by the advent of machinery is now performed with far greater ease and rapidity.

Balloon Framing is not, however, a manner of effecting by machinery what has formerly been done by hand, but embraces a series of improvements in the art of building, which time and experience have shown to be thoroughly practical—that which has hitherto called out a whole neighborhood, and required a vast expenditure of labor, time, noise, lifting, hoisting, and the attendant danger, can, by the adoption of the balloon frame, be done with all the quietness and security of an ordinary day's work. A man and boy can now attain the same results with ease, that twenty men would on an old fashioned frame.

Suppose we compare the heavy, cumbersome barn frame of to-day with the barn of fifty years ago, with its rotten tenons, bulging sides, and broken-backed roof. Can we see one single mark of improvement? Has 50 years advanced the art of building frames? What change is there for the better?

What is demanded, is something in keeping with the progressive spirit of the day. We want really better and stronger frames, and we want them to cost less. If our houses, barns and out-buildings can be built for less money, and be just as good, as convenient, and as safe, it is an improvement that will suit us.

The Balloon Frame answers these requirements. It has long since ceased to be an experiment; and where its principles are understood, no other style of frame is used.

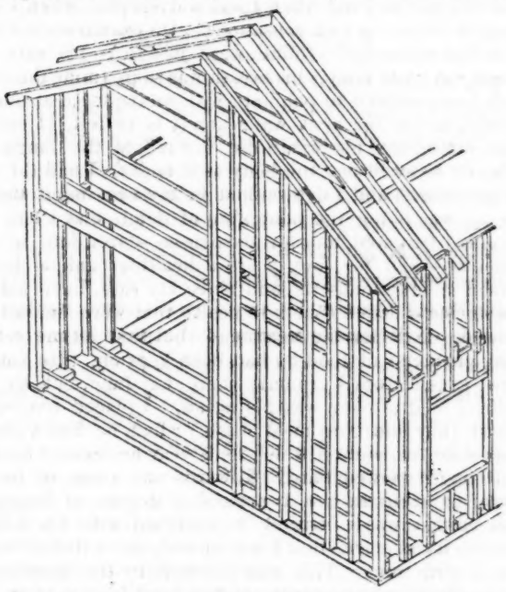


Fig. 1.—Isometrical Perspective View of the Balloon Frame.

The engraving shows a portion of a Balloon Frame, drawn in isometrical perspective. This is sufficient to show the whole manner of construction, the other parts of the building being a repetition. The manner of securing the different timbers is shown in figs. 2 and 3—the nails being driven diagonally, and in a manner to secure the greatest amount of strength.

The sizes of the different pieces of timber in a frame of this size, are sills 3 by 8—corner studs, 4 by 4—other studding, 2 by 4—plate, 1 by 4—side strips, or side girts, 1 by 4—rafters, 3 by 6, or 2½ by 5 will do—collars, 1 by 4—floor joists, 3 by 8, or may be 2 by 7. Rafters, studding, and joists, are 16 inches between centers.

Small buildings of this character, not calculated for heavy storage, may have all timbers two feet between centers. Small buildings of one story, as tool-houses, granaries, cottages, &c., will be perfectly strong and secure, if

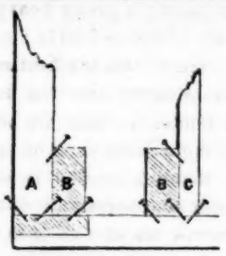


Fig. 2.—Elevation section—manner of nailing—A. corner stud, 4 by 4—B. joist, 5 by 3—C. 2 by 4.

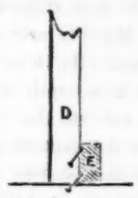


Fig 3.—Upper edge of joist—E. stud.

all the timbers above the first floor joists are ripped from common 1¼ inch floor plank—thus make studding, ceiling joists, and rafters, 1¼ inches by 5 inches.

For large barns, storehouses, &c., larger sizes will be required. The weight and power necessary to injure a building with 3 by 8 studding, with a double row of bridging, is more than is ever practically applied to any storehouse.

The lining of a balloon frame adds immensely to its strength, particularly so if put on diagonally; it may be done outside or inside, though on the whole the inside is preferable. If done outside, it should be carried over the sill and nailed to it; the sill being wider than the studding, in order to get a larger bearing on the masonry, and the floor joists being in the way, does not admit of inside lining being put on in the same manner. Close or continuous lining is not necessary for strength, but for dwelling houses adds much to the warmth. Large buildings, not used as dwelling houses, can be sufficiently well braced by diagonal strips of 1 inch board, 6 inches wide, nailed to the studding inside, 6 feet apart. Where vertical siding is used, these same strips can be put on in the same manner outside the studding. Let the strips run over the sill and nail to it. Between the strips on the sill, nail an inch board, and it is then ready for upright or battened siding. Small out-buildings, barns, &c., do not require any diagonal bracing.

Every stick of timber in a balloon frame not only has a weight to support, but its tensile and compressible strength, which theoretically is 11,800 pounds per square inch of its end area, is taken advantage of. This is not the case with the old style of frame. A balloon frame looks light, and its name was given in derision by those old fogy mechanics who had been brought up to rob a stick of timber of all its strength and durability, by cutting it full of mortices, tenons, and auger holes, and then supposing it to be stronger than a far lighter stick differently applied, and with all its capabilities unimpaired.

The balloon frame has been known in the newer sections of our country for many years; it has been tested and found to stand the test. It is not, nor cannot be patented; there is no money to be made out of it except as a public benefit in which all share alike.

The following are some of the advantages claimed for it:—

1. The whole labor of framing is dispensed with.
2. It is a far cheaper frame to raise.
3. It is stronger and more durable than any other frame.
4. Any stick can be removed and another put in its place without disturbing the strength of those remaining—in fact the whole building can be renewed, stick by stick.
5. It is adapted to every style of building, and better adapted for all irregular forms.
6. It is forty per cent. cheaper than any other known style of frame.
7. It embraces strength, security, comfort, and economy.

Architects, builders, mechanics, and practical men, are respectfully invited to prove the contrary.

GEO. E. WOODWARD,
Architect and Civil Engineer, 335 Broadway, N. Y.

☞ Officers BAINBRIDGE AGRICULTURAL SOCIETY for 1860:—

President—Hon. JOSEPH BUSH.
Vice-President—A. J. Sands.
Secretary and Treasurer—Joseph Juliand, 2d.
Directors—Charles Bixby, Walter Higly, Daniel Bristol, John F Landers, Reuben Searles, Charles P. Kirby.

CALLANAN'S TRENCHER.

☞ The difficulty in the way of accomplishing the DRAINAGE of our farms more perfectly, is of a double kind: the labor required in excavating either for tile or stone is not only expensive, but ordinary farm workmen have not had the experience necessary to do it well. It is a task which they almost uniformly undertake with bad grace, on the one hand, and which on the other is quite as often slighted if let out at contract, except under careful watching; in any event it is a protracted, tedious and costly prelude to the advantages which the farmer is told he is going to secure when once the water is fairly on its way out of the soil.

We have already alluded casually to a new contrivance for facilitating the operation of Draining, which has now been so far perfected that we think we may reasonably hope from it results of considerable importance. Mr. DAVID CALLANAN, a hard-working and energetic farmer residing about twelve miles from Albany, became a convert to the theory of thorough drainage some years ago, and began in 1853 to carry it into practice. He entered upon the manufacture of tile at that time mainly for the sake of securing what he wanted for his own use; and, from then until now, he has been adding to the extent of the underground channeling of his farm, until he has laid in all something like nine miles of tile beneath its surface.

The obstacles with which he had to contend in performing this labor and in getting it done, were such as to set him to thinking how they might be more advantageously encountered. After numerous experiments, the resulting invention has taken its present form; and we introduce it to the notice of our readers thus prominently, because Mr. C. is not by trade a manufacturer of implements or a speculator in patents, and, having no interest whatever ourselves in his invention—except as it may become a matter of benefit to the public,—we wish to lighten if possible the labors of those who are now engaged in draining, and to do anything we can to put the process within the reach of others who have not as yet begun.

The object of Callanan's Trencher is to loosen the ground so that it can be rapidly shoveled out. As the patent is not yet secured, we defer a complete description until hereafter, but may say that by cutting down at both sides of the ditch, and having also a third cutter in the middle, it detaches the soil to be thrown out, and thoroughly loosens it, to the depth of from 8 to 10 inches at once in the upper soil, and to a proportionately smaller extent at each passage through the harder substances below. We visited Mr. C.'s farm last week for the purpose of seeing its operation in a field which he is now preparing to drain. The sub-soil at a depth of from 10 to 12 inches, was a complete "hard-pan"—perhaps more than a third of it that stones of various sizes, so compactly packed in together no digging could have been done without a pick-axe, and many of the stones so large that it would be a long and arduous task to dislodge and remove them by hand.

The form of the cutters or teeth in this instrument, which are steel pointed, is such as to *keep them constantly in the ground at their work.* When we came to the hardest of the sub-soil, it was a good pull for two teams to scratch out three or four inches even, but it was successfully accomplished; upon coming to a boulder too firmly fixed to be moved at once, the return of the Trencher, striking it on the other side, in no case failed to complete its dislodgment. Several of the stones were split and broken as though a crowbar had been employed, and we watched the process with increasing satisfaction until the ditch was from 30 to 36 inches in depth.

The width and length of the cutters can be adjusted at pleasure, and the whole is so perfectly simple and strong that there seems to be nothing farther to desire in either of these respects. As its weight is some 200 pounds, it would be difficult to lift it out of the ditch for turning, but the horses or oxen themselves do this, while by making the tongues detachable, Mr. C. has contrived an easy way of obviating the trouble of turning the teams when there is the trench between them and a fence close at their heads.

We have not space to speak at present more at length upon the merits of this invention. By promoting the rapidity of the operation it does a great deal; by enabling the farmer to put any laborer at work who can handle a shovel, it does still more, and in the saving of labor and money, as well as of time, it seems to us to justify entirely the anticipations of its inventor. A team or two, according to the soil, can be employed for an hour in the morning in loosening up as much as there are hands to shovel out during the forenoon or during the day, if the horses or oxen are required for other work; or if it is to be done on a large scale, a heavy force of men, with their aid, must be able to go over the ground with wonderful rapidity, as compared with the slow process of hand labor. Mr. C. has also a contrivance for *filling drains*, somewhat similar to a reversed snow plow, which does its work completely, as easily as a plow would turn in one furrow, and which is also of use in leveling the surface of a field, by filling hollows, and scraping off hillocks or elevations.

A part of Mr. Callanan's land rests upon a stiff and compact clay, and we were assured that the Trencher here accomplishes an equal saving, while its work is done still more neatly than among the stones, where we saw it tried. The farm comprises some 200 acres, with a work-shop and forge, where Mr. C. has had a number of machines constructed to supply the orders of those who have seen its operation last autumn and this spring. His address, we may add to save farther inquiries, is Callanan's Corners, Albany Co.

There is much that we should like notice, if our limits permitted, in Mr. C.'s general farm-operations. Although still a young man, he is entitled to rank as one of the most thorough and enterprising farmers in the county.

FARMER'S CLUBS.

☞ Quietly progressing in numbers and influence, we are inclined to think that FARMERS' CLUBS are beginning to assume an importance they have never before possessed. In some parts of Massachusetts, and in one or two counties in this State, we might point to several examples of excellent management and remarkable prosperity. Indeed our attention has been particularly attracted to the subject by the receipt of a number of copies of the Greenfield (Mass.) *Courier*, in one of which alone we find interesting and valuable reports of the proceedings of four different clubs—those of Greenfield, Ashfield, Bernardston and Heath. Another contains a report from the Wapping Farmer's Club, and we do not know but there are still others beside these five in that same region.

JAMES S. GRENNELL, Esq., Secretary of the Greenfield Club, to whom we are indebted for the papers alluded to, has taken a great interest in organizations of the kind, and by lectures before them, as well as letters through the press, has been laboring earnestly to promote the agricultural advancement of his locality. A Farmer's Club, to tell the truth, may often fail—not for lack either of the right materials in ample quantity, or of a spirit of harmonious co-operation, but simply because, like a well made watch lying idle, it is not properly *wound up;* and fortunate is the club which, with intelligence and kindly feeling, includes also among its members some who are willing to be ever on the alert to do this *winding.* It is a task which cannot be accomplished once for all, but requires a frequent exercise of the faculties and tact, that interest may never flag, and some good be constantly developed.

Kindred in some degree to Farmer's Clubs, are associations of another kind, which are also growing up, one by one, over the country. A prospectus before us affords a case in point—that of the "Homer Rural Improvement Association" in Cortland County.* The "Objects of this Society," are indeed worth copying, because it is now just

the season of the year when similar bodies may be most effectively organized. They are

—— "To improve the condition of the village of Homer and its vicinity, and specially

I. To beautify the Public Park, by making and properly sustaining all necessary and convenient walks and carriage-ways.

By planting and protecting shade trees, ornamental shrubbery and flowers.

By making such other improvements from time to time as shall be deemed useful and practicable.

II. To improve and beautify the whole town and vicinity.

By encouraging and aiding where necessary, the planting of shade and ornamental trees along the public streets.

By securing the removal from puplic places and highways, any noxious weeds and other nuisances, that may detract from the beauty of the town.

III. To encourage the introduction into the town, by exchanges and by purchase, of any desirable or rare trees, shrubs, flowers, seeds, fruits, &c.

In addition to the annual meetings, three other stated meetings are provided for:

1. A Spring Gala-day on the Saturday preceding the 1st of May, for general tree planting and for such other exercises as the officers may appoint.
2. A Summer Festival in June.
3. A Fall Floral and Fruit Festival.

The concluding provision is also an important one:

As tree planting in the Public Park and along the highways, is among the most prominent objects of this Society, it is made the duty of each male member to plant at least one tree or shrub annually, in such places as the officers may direct.

—— Both these subjects have been passed by from week to week under the pressure of other matters, until it is now too late to give to them with advantage the space which at one time we hoped to have done. Spring with its labors is already upon us, and another sowing and reaping will soon have been numbered with those of years gone-by. But we should like to bespeak the assistance of our correspondents another autumn, in discussing the best plans for Farmers' Clubs, and to elicit then from those that have been successful, any experience that is likely to prove advantageous to younger bodies. Who will take a little pains to collect for us during the summer some facts as to the number of such organizations in active operation, their system of proceedings, times of meeting, &c.? We, and we think our readers, too, would be greatly obliged for such information, and it could not fail, toward the close of the active labors of the year, to produce an excellent effect in providing new means of improvement for the quieter months. Those who appreciate Farmer's Clubs will please not permit us to forget the cause, five or six months hence, and we shall hope at that time to put them in the way of doing much good unto others.

PLEURO-PNEUMONIA IN CATTLE.

☞ The recent supposed appearance of a contagious Pleuro-Pneumonia among cattle in Massachusetts, renders any additional light that can be thrown upon the subject at this time particularly acceptable. Even if the disease that appeared was not that which has occasioned so much loss in other countries, or if, being the same, it has already mostly passed away,—it will still be advantageous now to place on record any thing that can be learned from its ravages abroad, in order that we may be prepared to give it a proper reception if it should come among us hereafter.

Col. B. P. JOHNSON has received through the Russian Consul General at New-York, M. DE NATTHIEK, a quarto volume of over a hundred pages, printed at St. Petersburg in 1854, containing an official report upon the subject, with two colored plates. As this is in German, and extends over ground so wide, we pass it by for the present, but if further examination renders it expedient, shall endeavor at some future period to review the facts and recommendations it offers.

We are also indebted to Col. J. for a copy of the "Journal of the Chemico-Agricultural Society of Ulster," Ireland, for February. From the proceedings at the January meeting of the Council, we learn that Dr. HODGES had received a letter from the county Tyrone, stating that its writer "had never lost an animal by the disease, and that the only medicine he administered was arsenic."

"He mixed five grains of it with white sugar, and gave a teaspoonful of the mixture every three hours by pouring it down the throat of the animal, and also three quarts of gruel given in the same way twice a day. That treatment he found invariably successful. The first green food the animal was afterwards allowed to get was grass. The writer further added, that in his own locality he had known arsenic to fail, but he apprehended it had been wrongly administered."

Another gentleman present, Dr. STRONGE, had "known of three or four grain doses" of arsenic given three or four times a day, "and seen it of the greatest possible use." He thought it in all cases of great importance that the first symptoms of the disease should be detected, and that further investigations should at once be made into its real character.

"His view was that it was fever that went on for several days, and that upon that fever came pleuro-pneumonia, which was a disease really beyond the power of remedial agents. He believed that when the lungs became involved, the disease was then almost incurable."

The Chairman having suggested that there should be no hay lofts in cattle sheds, with the view of promoting better ventilation, Dr. S. had no doubt that this would operate in some measure as a preventive, but had seen and known the arsenic remedy to act so favorably that until some thing better was discovered this course of treatment was undoubtedly the most rational.

From the remarks that followed we infer that this disease is spreading in Ireland, and that it was carried there originally by importation.

Western N. N. Ag. and Mech. Association.

☞ A meeting was held at Rochester pursuant to notice, March 15, for the purpose of inaugurating a "Western New-York Agricultural and Mechanical Association." From the report in the next day's papers, we learn that Gen. Jacob Gould of Rochester, was chosen President, and Jacob Hinds, Orleans; C. K. Ward, Genesee; J. E. Patterson, Monroe; Orange Sacket, Livingston; Wm. S. Clark, Ontario, and C. B. Rogers, Wayne, Vice Presidents of the meeting. A number of speakers took part in the discussions that ensued.

On motion of P. Barry, a committee of five, consisting of the following gentlemen, was appointed to present a plan of organization for an Agricultural, Horticultural and Mechanical Society for Western New-York, and report at the opening of the afternoon session: P. Barry, Monroe; Martin Briggs, Monroe; P. P. Bradish, Genesee; F. B. Pierson, Livingston; E. M. Parsons, Monroe.

The Report of this committee, presented in the afternoon, mentions among the peculiar features which it is desired to present in the new association, the continuance of its shows for a longer period than has heretofore been customary, and "connecting with them a Fair for the sale and exchange of farm stock, implements, machinery, &c." They distinctly repudiate, as several speakers had previously done, "any appearance of antagonism to the State Society." They recommend

"the plan of a Joint Stock Association, to be designated the Western New-York Agricultural, Horticultural and Mechanical Association, to be located permanently at Rochester, to have a capital of at least $50,000 in shares of $10 each; to obtain a charter from the State; to procure forty to one hundred acres of suitable land for Show Grounds, and erect thereon spacious and convenient buildings for the display of articles in the various departments."

After some speeches pro and con, this report was adopted. From the remarks of D. D. T. MOORE, Esq. of the Rural New-Yorker, the design entertained is apparently to merge the present County Society in the new Association. Whether Ontario and other neighboring counties are to imitate Monroe in this respect, is not stated. They are expected, however, to subscribe towards its support. Mr. Barry was careful to point out that no idea of rotation from one point to another in Western New-York could be entertained for a moment. We have no doubt that there are resources enough in that region of country to render the new Society the most flourishing and successful local organization in the State, and it now seems to be in the right hands to call these resources into activity.

OFFICERS OF GREENE CO. AG. SOCIETY for 1860:

President—ADDISON P. JONES.
Vice Presidents—Lewis Sherril, Burton G. Morss, Elijah P. Bushnell, Prentiss W. Hallenbeck, Lucius Pond.
Treasurer—Danforth R. Olney.
Secretary—Horatio L. Day.
Marshall—George Beach.
Directors—Thomas B. Holcomb, Horace B. Kirtland, John Feeney, Isaac J. Van Allen, Luke Roe, Edward Johnson.

PEACH BORER---Egeria Exitiosa.

Editors Co. Gent.—Every one who has cultivated the peach must be familiar with the mischief done the trees by the larvæ or worm of this beautiful insect. Without going into a long scientific description of the male or female larvæ, the pupa and follicle, which would be interesting only to the entomologist, I shall merely remark that the insect or fly which lays the eggs on the tree might be taken for a wasp. The only difference consists in its not having the divided body, which, in the female of this insect, is of a very dark steel-blue, with a purplish tinge and a yellowish band across the body about two-thirds of the way down, being provided with two blue wings, and two half blue and half transparent. The male is all blue, with transparent wings. They are rarely seen, and when seen are ever in an active and restless state. In eighteen years I have not seen half a dozen; but that is not material—the worm is the principal object of interest, and he may be found on the root of almost any peach-tree, varying in number from one to a dozen or more. Eighteen years ago I planted 2000 of these trees, and having already heard something of this destroyer, thought it must certainly be an easy matter to head him, and without regard to the numerous preventives prescribed by the knowing ones, began with an original experiment, which consisted in binding strong paper about the lower part of the trunks, which, in order to prevent the destructive effects of weather, I painted on the outside with coal-tar, that generally supposed bane of the insect-world. Having treated about 200 of the trees in this manner, I resorted to the old methods with the remainder—putting ashes about some, dosing some with lime, painting some a foot high with coal-tar, and planting others around with that sovereigns't remedy of all—tansey. But it was all in vain; the eggs would be laid and the cruel work go on.

If there was any desirable difference in the vigor of the attack, I fancied it to be in favor of those to which the lime had been applied; though I believe the paper and tar treatment would have proved effectual could it have been preserved, but in most cases it was sufficiently gone by fall to permit the deposit of the eggs; for it must be remembered that this insect lays two distinct crops of eggs, one in June and the other in September, and hence the only certain preventive is one that will be active before and after these months. Now, with all respect for the general belief in the virtues of coal-tar in such cases, I would advise every one to let it alone. I have killed both apple and peach trees with it, and not, as may be supposed, from any poisonous quality in the tar, but simply because being black it becomes such a powerful absorbent of heat as literally to bake that portion of the bark which it covers. If any one would test this, let him place his hand on the side of the tree any time in June or July and he will know why coal-tar kills trees about which it is used. To be sure, the latter-day practice of low-limbing does much to obviate this difficulty, and yet I have long been convinced that the popular idea that powerful and disagreeable odors have any terror for the insect tribe, is a popular error; they either have no olfactories at all, or what they have are exceedingly limited in the capacity of discriminating.

Tar is, doubtless, useful in keeping off rabbits, &c., but it should be mixed with sufficient whitewash to give it a color resembling the bark.

A correspondent of the Scientific American in a late no. recommends coal-tar to be used at the base of plum trees as a preventive of the curculio, but he does not seem to know that that insect has wings. I tried that same plan many years ago, when the opinion prevailed that the curculio was too sluggish to fly, and although it did not kill the trees outright, wherever the sun had access, there the bark was destroyed. Boiling water will kill the peach-worm, but the tree goes with them.

Caustic lime packed around the root, and then watered, has been recently prescribed, but if heat enough is thus generated to cook the worms, you may depend upon losing the tree at the same time.

The remedy that I will now advance may not prove infallible everywhere, but it has succeeded well with me, and has fully convinced me that this plague, as well as others of like nature, can be most successfully overcome by mechanical processes. We know that in the case of the plum, jarring the tree has been decided to be, thus far, the most effectual preventive of the ravages of its great enemy. My plan is to give the peach trees a thorough hand worming in June, then to pack the clay (which in planting was thrown from the bottom of the holes) firmly around the trunk, from six inches to a foot in height, conically, and hoe it away again in October. I had this mounding operation performed about two years ago, (neglecting, however, to remove the clay until last fall,) when in about 1,000 trees we found but three worms! The rationale is this—the insect requires and searches for tender bark on which to lay its eggs, and to find this will remove loose soil at the base of the tree for half an inch and even an inch down. When the base is thus mounded they find nothing but hard bark—another is then tried, when finding things in the same condition, they finally abandon the field altogether. It is but seldom we find worms above ground in the hard bark, although they do sometimes resort to the forks of the main limbs where the bark is tenderer, but one there is soon detected.

Now, as above stated, I do not put this forth as an infallible remedy applicable to all climates, soils, and situations; but it has succeeded in my case, and being both cheap and simple, certainly deserves a trial.

Mt. Carmel O. T. V. Peticolas.

[For the Country Gentleman and Cultivator.]

SCRATCHES IN HORSES.

I frequently see articles in the agricultural and other papers headed "A Cure for Scratches in Horses," in which a great variety of remedies are recommended. Some of them have the appearance of being based upon scientific principles, while a majority partake more of quackery than common sense. One man calls it a *local* disease, and treats it with a variety of ointments and washes; another says it is *constitutional*, and drenches his horse with all sorts of nostrums. Thus they jog along, no two agreeing in regard to the nature of the disease, its cause, or its treatment. This diversity of opinion has induced me to give *my* experience, that others may be saved the vexatious disappointments which the majority of these "articles" will encourage.

While yet a lad, I had charge during the winters of a portion of my father's horses as my part of "the chores," and the first indication of the scratches would send me delving in the pages of *Mason*, or *Hinds*, or "Every Man his own Doctor," to find a remedy, and when found I as eagerly applied it. What was the result? Well, "to tell the truth," I did not have very good success; for if they healed they would soon appear again, and as might be expected, I was lead to believe it constitutional, and turned to dosing the poor animals with like effect. And thus between eight or ten horses, I was pretty sure of having one or more patients on my hands nearly the whole time. You can imagine my disappointment,—and I abandoned all applications, "threw physic to the dogs," and commenced to keep my *horses'* legs *clean;* since which time I have had no trouble with "the scratches." It is something over twenty years since I have made an application or given a dose of medicine for this disease, and though I have had more or less horses during the whole time, I have had no difficulty in keeping my horses free from this malady, unless I trusted them to other hands to *groom*.

But I have said enough; and now for *my* course of treatment—both preventive and cure. It is simply this: *when grooming the horse, to clean his legs and heals with a common horse brush.* I do not stop brushing when the thickest of the dirt is off, but continue to brush until the hair and skin are *perfectly clean*. This is done every morning, and as I have already said, I am never troubled with their appearance. I now own a horse, which when purchased two years since, was badly troubled in this way, and had been for three years previous to my personal

knowledge. With my usual care in cleaning, he was relieved in the course of ten days or two weeks, since which time there has not been the slightest appearance of "the scratches."

Nor would I advise washing the sores with castile soap as is generally recommended, because it *is rarely done as it should be*, and the same end can be attained by brushing, unless ointments have been applied. And unless the soap is perfectly rinsed off, and the legs rubbed until they are perfectly dry, the washing is *positively injurious*. I would say to all, "take the brush and try that, and if it operates in other hands as it has in mine, they will be satisfied with the result."

Some may ask, "What is your theory—the *modus operandi*—of the brushing?" If there are any such, to them I would say, "throw both theory and *modus operandi* to the dogs," and not discard a *fact* because it is not accompanied by a senseless and unintelligible theory, as is too often done.

I intended to have spoken of the too common practice of dosing horses to "keep them healthy," but find my article is already too long, and refrain. NOT A V. S.

We hope the writer will resume this subject, as the proper treatment of horses is one which needs discussion.

CAULIFLOWERS.

The Gardener's Chronicle, London, quotes from a German paper the following description of the method used by the Dutch to obtain their Cauliflowers, which are famous for their size and delicacy:

In the autumn they dig deep some ground that has not been manured; at the beginning of May they sow the large English Cauliflower upon a bed of manure, and cover it with straw mats at night. When the young plants are 3 or 4 inches high, they harrow the ground that had been prepared the autumn before, and with a wooden dibble, 18 inches long, they make holes about 10 inches deep, at proper distances apart, and enlarge them by working the dibble round till the hole at the top is about three inches in diameter. They immediately fill these holes with water, and repeat this three times the same day. In the evening they fill them with sheep's dung, leaving only room enough for the young plant, which they very carefully remove from the bed of manure, and place in the hole with a little earth. Directly afterwards they give them a good watering, and as soon as the sun begins to dry them, water them again. Furthermore, as the plants grow, they dig round them and earth them up in rows. When the head is forming, they pinch off some of the lower leaves of the plant, and use them to cover the young head.

[For the Country Gentleman and Cultivator.]

CLEAN MILKING OF COWS.

One of the most common improprieties of dairy management, and one of the secrets of success in butter making, lies just here. It is well established that the last drawn gill is nearly all cream, and when one of these little measures of milk are left in the udders of several cows, say ten, as is often done, no less than a quart and half a pint of the richest milk is lost every morning and evening, a perfect waste, and more than a waste; for if this were all, the matter would not be so bad as it really is; but leaving milk in a cow's bag has a most deleterious effect upon the cow, causing her gradually to produce a less amount to such a degree in the end, that it becomes clearly manifest in a period of two or three months that there is a rapid falling off, and cows, naturally good, are much injured, to say the least. This neglect is fruitful of garget and other disease, and, if long continued, the cow never recovers her full milking powers. This matter is worth more than a casual thought, and every effort should be made, without being severe upon the animal, as the thing can be accomplished with the utmost ease by a good milker, to milk cows well and perfectly. If the cow is disposed to hold up her milk for any reason, do not leave her side at once, but milk on. To guard against this, it is a very good plan to adopt the practice of feeding with great regularity at the time of milking.

Regularity in feeding is very important. Mr. Stephens, in the Farmer's Guide, relates an instance of serious falling off in the product of a dairy, resulting from a single failure to feed at or near the usual time. If a cow is inclined to kick, examine the udder and see if it is not sore, when she has good reason to do so, and attention should be directed to the case at once; even then she should be milked gently; slowly or fast, as appears best; and, by the way, in ordinary milkings, the faster it is done the better; by all means milk with considerable rapidity on many accounts. If the cow kicks when her udder is not sore, it must be owing to previous rudeness of treatment, and should be overcome by gentleness and persuasion. If the animal is wild, and has lately come into your possession, having become in other hands an inveterate kicker, do not discard her at once. We have known the most desirable cows to be addicted to this habit. She only requires, in addition to the above gentle treatment, which should indeed never forsake the milkman or maid in their management of cattle, under any circumstances—(kindness and attention to his animals being a great resource and a continual reward to the farmer)—that the hind legs be tied to each other as she stands in an easy position—not bound together tight or strained, but separated at the usual distance when untied. Many have been soon cured in this way, who, from being difficult of approach, have become valuable animals, yielding a large quantity of milk, and very docile and quiet. G. P. S.

[For the Country Gentleman and Cultivator.]

TRANSFERRING BEES.

MESSRS. EDITORS—I see in the Co. Gent. of Jan. 5, that some one wishes information in regard to driving bees, or whether it is possible to move them from one hive to another. I will give some of my experience the past season.

In May last I purchased the right to use the Langstroth bee-hive. Shortly after, one of my neighbors, hearing I had got that hive, came to see me, as he had heard and read about them, and also that bees could be moved from the old box hive into them, and to see the experiment tried. He offered to give me a colony of bees in one of the box hives, if I would move them into the Langstroth. So I got my hive ready and started to my neighbor's, with doubts in my own mind as to the result, as I had never seen anything of the kind myself, but the experiment was entirely successful.

Now the way it was done was this. I took the hive containing the bees some five yards from where it stood, and turned it bottom upwards, and placed over it an empty hive of corresponding size, after which I gently drummed the bottom hive with a couple of small sticks, for about fifteen minutes, when I found the bees had all ascended to the top hive. I then set it on a sheet and tied it up. I then cut the combs loose from one side of the hive, and with a saw blade forced off the side of the hive, took out the combs, fitted them into the moveable frames, adjusted them in the hive, and closed it up all but the entrance. I then placed the new hive on the old stand. I took the hive containing the bees, and shook them out on a cloth, and with a large feather swept them gently toward the entrance of the hive. In a very short time they all went in. Since then I have transferred fifteen colonies from old hives in the same way. I have also moved two colonies together, with their combs and stores, from hollow trees—one of them the 19th of the present month.

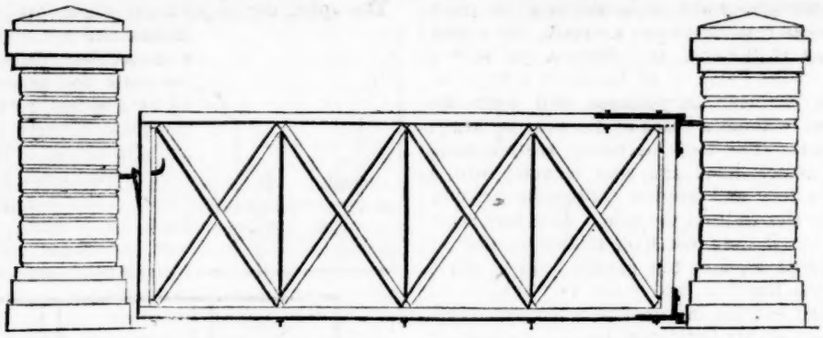
Bucks Co., Pa. H. M. TWINING.

[For the Country Gentleman and Cultivator.]

COTTON SEED MEAL.

EDS. CO. GENT.—I have been using the above, for cows that gave milk, through the winter and thus far in the spring, viz., one farrow cow and two that are coming in some time in May, which I have before let go dry through the winter, but see no prospect of their being dry as long as I feed three pints of cotton seed meal to each per day. I took six bushels of oats, three of corn, and two of rye—had them ground together, trying that first, three pints each per day, which increased the quantity, but by putting into the feed three pints of cotton seed meal it nearly doubled the quantity, besides adding materially to the quality, six quarts making one pound of good sweet butter. Cows doing better as it regards flesh, than I have ever had them. Begin with a little in bran or any feed you use, as they do not like it at first, but will soon be very fond of it, stirring it in cold water. I intend trying it with calves by scalding it, and have no doubt the effect will be advantageous. I say to brother farmers, try it till higher than $1.75 per cwt. JUDSON WADSWORTH.

West Winsted, Conn.



THE WOODWARD GATE."---For Parks Country Seats, Farms, &c.

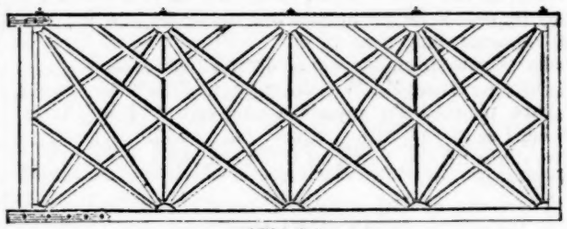
Eds. Country Gentleman—It perhaps never has occurred to the gate-building community, and more especially those who are studying economy, that the well known principle of the Truss affords the best combination of strength, durability, and beauty.

In the application of the Truss to a gate, there is nothing new but the application. It is therefore unnecessary to advocate any of the good qualities claimed for the Truss; they have been so thoroughly proved and adopted in all the best forms of bridges and roofs, as to leave no doubt of its superiority. The enormous tensile strength of iron, being about 60,000 pounds per surface inch of end area, being brought in opposition with the compressible strength of wood, renders a Truss almost as rigid and unyielding as a solid plate of iron.

The figure at the head of this, illustrates the principle. In each panel are two braces of 2 by 4 stuff, halved edgeways into each other, the ends of the braces resting against small triangular blocks, as shown—the iron rods, ⅜ths to ½th inch in diameter, as may be required, pass through the top and bottom rail, and through the triangular foot blocks; the heads of these rods are countersunk in the top rail, and are not seen in the engraving. Mortices are sometimes made at each corner of the gate, and are the only ones about it. Nails are entirely unnecessary. The braces are all of equal length, and cut square at the end, the bevel being made on the foot block.

The style of hinge shown in the above figure, is peculiarly adapted to this gate; the rod next to the heel-post secures the hinge, as well as performs its duty in the truss. The other bolts in the hinge are carriage bolts, with nuts, and are every way better than ordinary screws or bolts, the extra cost being but a few cents. When the iron rods are tightly screwed up, each brace is held firmly in its place by compression, and does not need nailing or any other manner of security. The braces might have a small tenon or dowel on each end, or better still, if the triangular foot blocks were made of cast iron, with a small lip raised on each end, they would be necessarily secure. If the timber shrinks or works loose in any manner, it can be brought back to place by turning the nuts. If the braces are all of equal length, and cross each other at their centers, the gate can take no position in a vertical plane, but the one in which it is originally placed—it must always be square at the corners. The only condition in which it can sag, is when a weight is applied sufficient to compress the braces and extend the iron rods. If, however, by the unequal shrinkage of the timbers, or from any cause whatever, the gate should sag, it can be easily remedied by unscrewing the nuts, and placing a thin piece of wood under each brace, running from lower rail towards latch post; in this manner the forward end of the gate can be raised, at any time, as high as may be found desirable. Any brace may be taken out and replaced, and the whole gate rebuilt as fast as the timbers decay.

The work on this style of gate is but little, as most of the stuff is got out with square ends; the cost of the iron rods is about 30 cents each, and the labor saved is a good deal less than their cost; the cost of hinges, such as shown, and the manner of securing them, is less than any other equally as durable. Small horizontal rods, or any ornamental arrangement, can be introduced to make it pig tight.

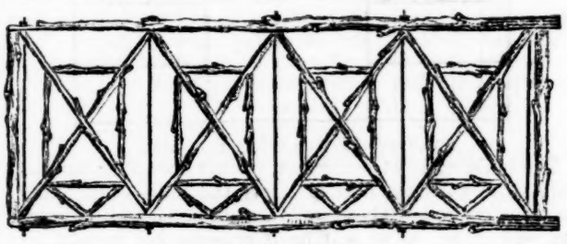


(Fig. 2.)

Fig. 2 shows a gate on the same principle, but double trussed, and with double braces, instead of halving braces into each other. They are used too, one way from lower rail towards latch post, and one between running the opposite way, as shown in fig. 3. These braces are of white pine, 1 inch square, and have proved to be all that is necessary. This gate, fig. 2, was erected for the Rev. C. B. Wyatt, at New-Windsor on the Hudson, in July, 1859. It presents an entirely novel appearance, and unlike any other gate yet erected.

(Fig. 3.)

This principle in gate building is applicable to any kind of gate required, from the plainest farm gate to the magnificent entrance gates of parks or country seats. It is susceptible of innumerable changes in design, and can be made elaborate and ornamental in a high degree.



(Fig. 4.)

Fig. 4 shows a farm gate erected in November, 1859, at "Keewaydin," near Newburgh, N. Y.; braces halved into each other, and without foot blocks. One day's work, though after a person has made one, he can make two in the same time.

Rustic gates, and rustic work generally, except on a small scale, have been failures; but with this application rustic work of any kind can be made immensely strong. For farm gates, &c., nothing is cheaper, more appropriate, and durable.

The principle is not new, but the application is. There is no patent on it. It is merely a hint for those who know how to appreciate a good thing when they see it.

Geo. E. Woodward,
Architect and Civil Engineer, No. 29 Broadway, N. Y.

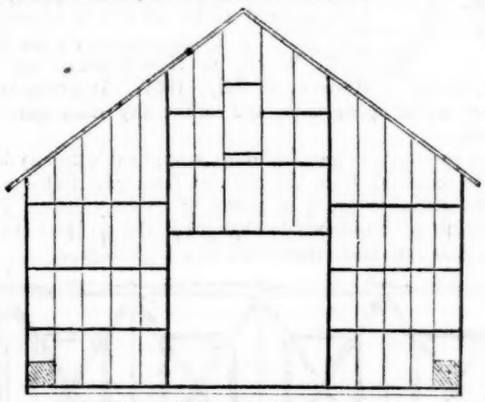
Western Hog-House and Corn Crib

Eds. Co. Gent.—In the Co. Gent. of Dec. 15 last, we find the principle of Balloon Frames pretty well illustrated by G. E. Woodward of the city of New-York. The cuts and explanations there given, are worthy the careful study of all who ever intend to erect any frame

buildings. His descriptions and explanations are so plain that any man who can read figures on a square, saw a stick or board off square at the end, and drive a nail with a hammer, can put up the frame of all his barns, corn cribs, hog-houses, sheds, stables, dairy-houses, and even the frame of his house, without a brace or mortice, no augur or pin being needed. The tools necessary are a square, saw, one paring chisel, hand axe, and hammer, with a plane to plane the door and window casings for his out-buildings, and a leveler to level the sills. This may seem strange to some, but if they will look at the number of the Co. Gent. referred to, they can readily see how studs and joists can be put together, and make very substantial buildings. If I had had the information referred to, previous to the erection of my buildings, I could have saved at least one-third of the expense in the frames. In timbered regions, where small round timber is abundant, it may be well to follow the mortice and tenon practice; but as a general thing most of our buildings are and must be made of sawed lumber, particularly in our great west.

Since receiving Mr. W.'s description of Balloon Frames, I have planned for myself a corn-crib and hog-house, which I send you, with a request that you will suggest such alterations for the better as will be suitable to your long experience.

There are no improvements more needed in the west than the proper storage of our large corn crop, and I can but revert to the too shameful waste in feeding it out. I suggest the following plan, hoping that it will be carefully criticised and reported upon by others. I am no mechanic, having never built a building of any kind, but have a desire to see less waste and more profit among our western farmers. The usual question is, how much do we *raise?* It should be rather, how much do we *save?*

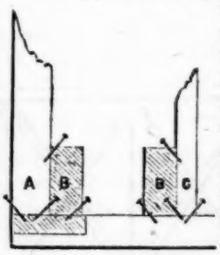


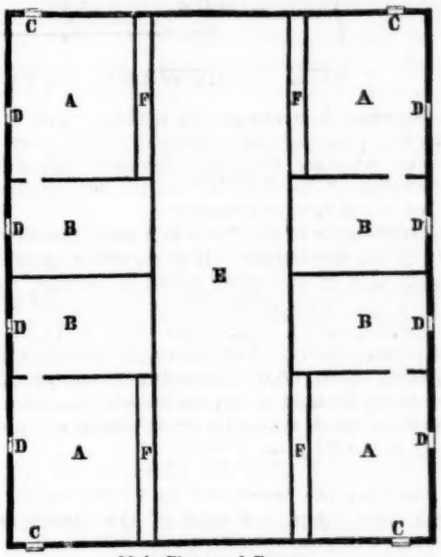
End View of Frame before Boarding.

The building is 24 by 30 feet, resting upon four parallel walls—(no walls are needed across the end)—well raised from the ground. These walls should be laid with mortar and well done, as we will have considerable weight for them to support before we get through. Our wall and timber being ready, we will now commence to put it together. Sills 2 by 6 inches, halved and nailed at the corners. Two studs 4 by 4, for corners, and eighteen studs 2 by 4 each, 12 feet long, with gains 1 by 4 inches, four feet from each end for outside, and also one gain 1 by 4, five feet from the lower ends for inside. Into these gains are put oak slats 1 by 4 inches, and nailed. On the ends, for upper part, nail on a board 1 by 4 inches. Make another to match. We now have the two outside bents. Raise plumb and stay lath. The two inside rows of studs or bents, made of studs 3 by 4 inches, and same distance apart of the outside rows. The outside or end ones, must be 4 by 4; to these the doors are hung. Gains are cut 1 by 4, five feet from the lower ends, into which are placed oak slats to correspond with the outside slat. These studs are of sufficient length to reach and unite with the rafters. The end studding, 2 by 4, are now put up. The corners and door-posts 4 by 4, as already described, with slats as represented in the end view.

The floor joists are 2 by 6, placed edgewise by the side of the studs, and spiked to the sills and studs. Nails driven as represented in annexed figure.

The upper tier of joists are eight feet long and 2 by 9 inches, and rest on edge on the inside oak slats, nailed and spiked to the slats and studs. The rafters, 1½ by 5 inches, rest upon the narrow plate directly over each stud, and also spiked to the inside row of studs, which reach the rafters in the center. Rafters projecting from plate 18 inches. Our frame is now complete. Board vertically with planed boards, and batten.





Main Floor and Rooms.

A. Feeding Rooms, 8 by 10 feet—B. Sleeping Rooms, 5 by 8 feet—C. Entrance door for hogs—d. Blind windows—E. Driveway, 30 by 10 ft, —F. Feeding Troughs.

For each feeding-pen and sleeping-room, put in a heavy blind, hung on hinges, to allow ventilation when opened or shut. Through this place the manure is removed from the pens. Lower floor made of two inch plank. Troughs and spouts of oak stuff. Other lumber can be all of pine.

For ceiling on the outside row of studs around the pens and partitions, use inch boards, ceiling on each side of driveway 2½ feet high. Doors 8 feet square, or double, fastened in the center of each. One large glass window in each gable. The four pens will hold each from 6 to 8 common sized fatting hogs. The space over hog-rooms, will hold, if 8 feet wide and 8 feet high and 30 long, 625 bushels of corn in the ear on each side of the driveway. If more corn is on hand and wants a shelter, nail a few narrow boards to the center and outside studs, just below the plates—ceil up with any culls of boards, and put up the corn even against the rafters. Then if there is more corn still, take joists 2 by 9 inches, and put them over the driveway, eight feet from the floor; lay on some loose boards, drive in the load and throw it up. Put in the joists as you proceed, and a few of the last loads can be put up while the team is out of the back door and the wagon inside. Fill up, even to the very ridge.

By this time we have a building 24 by 30 feet, 30 fatting hogs, and about 2,000 bushels of corn. When you wish to prepare corn for market, the corn-sheller is placed in the alley, the corn shelled and sacked. Two men, with a good machine, will sack from 100 to 150 bushels per day. The alley can also be used to put in many farming tools, or even will make a good and convenient place for the carriages, sleighs, &c. After the hogs are butchered there will be room in the hog-rooms more than the store hogs will need. There will be a fine place to shelter and feed calves.

The amount of lumber, all in board measure, will be about 7,000 feet. Entire cost of materials, paint, &c., about $140. As there are many a western farmer who fattens over thirty hogs, if he builds after this plan all he has to do is to add in length to suit his convenience.

Rock Island Co., Ill C. G. TAYLOR.

TREATMENT OF SPAVIN.

I have a horse that has a bone spavin. Is there any cure for it that you are aware of? I am advised by some to let it alone—by others to fire it, and do not know what course I better take. L.

Confirmed spavin is probably never radically cured. Firing and blistering are the old remedies, and sometimes produce apparent relief, but they are now discarded by careful practitioners. Dr. Dadd recommends rest during the inflammatory stage, and the application of cooling lotions to the parts. He uses a mixture of 4 ounces of muriatic acid, and six ounces of tincture of bloodroot, in two quarts of water, and apply this daily by means of a sponge. Or, another remedy, equally good, is a mixture of 4 ounces of very strong vinegar, 2 ounces of proof spirit, and 3 ounces of common salt, dissolved in a quart of water. The following is his mode of application:

Take a piece of sponge, slightly concave, corresponding as near as possible to the form and size of the hock; by means of a few stitches, affix two pieces of tape or linen, so as to form an X; each piece must be long enough to encircle the joint two or three times; after dipping the sponge in the mixture, it must be applied to the inside of the hock, and there secured, and afterwards kept constantly moist. By a faithful application of the above the inflammatory symptoms (which are not confined to the joint alone, but prevail in the surrounding tissues) will soon subside, and anchylosis progresses in a slow, yet favorable manner, without the usual pain and irritation

[For the Country Gentleman and Cultivator.]

CULTURE AND VALUE OF MILLET.

Eds. Co. Gent.—As there seems to be a great diversity of opinion regarding Hungarian grass, I cannot refrain from giving my testimony in its favor. Last spring I came in possession of a farm which had been rented a number of years, and I assure you it had fared not one whit better than other rented farms, and had not one acre of good meadow in the 100 of cleared land. There was one piece which was called meadow, but it was so overgrown with bull rushes, flags, and other coarse herbage, that I thought it of little value in its then state, and had it plowed up. Wishing to do a dairy business, I cast around me to see what I could plant or sow to take the place of hay for winter food. After much inquiry I concluded to sow Hungarian grass and millet. As I had an extra amount o, labor to perform to get my land in some kind of shapef did not get the Hungarian grass sown until the third week in June. A portion of it was sown on a heavy clay sod; this did not yield over one and a half tons per acre. A portion on an old field, which had been planted to corn and potatoes, and sowed to oats and rye continually for 18 years, ever since the farm was first put under cultivation, without the first particle of manure; this yielded about one ton per acre. The balance was sown on land which had been cropped two years only, and the year previous had been planted to corn and potatoes. This being in good heart and condition, gave us from 2½ up to 4 tons per acre. In one corner of a field planted with market vegetables, there was 30 rods which was too wet for use until late in June. This had been plowed the year before, but being so wet was allowed to lie fallow. We plowed this when we plowed the balance of the lot, and on the 22d of June plowed again, and sowed with four quarts of Hungarian grass seed. On the first of September we cut and drew into our barn from this 30 rods one and a half tons of dry hay.

The result of our experiment is as follows: From 15 acres of Hungarian grass and 3 acres of common millet, we have fed 27 cows, 1 bull, 2 oxen, and 3 horses, from December 1st until this 6th day of March, and still have enough left to carry them until the middle of April. Our stock have had all the hay they would eat. I have no desire to have any person believe that I would try to winter a parcel of milch cows without a good supply of roots. Our stock will have consumed something over 3,000 bushels of turnips, mangolds and parsnips by the first of May, and are now in much better condition than when we commenced feeding them in the fall.

I am so well satisfied with my last year's experience with Hungarian grass, that I shall sow from 50 to 60 acres this spring, a portion of which I shall cut for soiling during the summer, and hope to feed 50 cows from the balance next winter. I have no doubt that with land in good heart and tillage, we can get from three to five tons per acre of most excellent fodder. Both cows and horses eat it with great avidity. Certainly our horses never looked better or were capable of doing more hard work than this winter, neither will they eat as much grain as when fed on the best English hay. Both horses and cows eat it much closer than any other hay; at least such has been my experience. I am satisfied that it will yield a greater amount of fodder than any other of our cultivated forage plants at the same cost, and that it will ripen if sown as late as July 10th, at least sufficiently for good Hay. The seed should not be covered over half an inch, and it should be cut for fodder while green, but after the seed is well formed.

Detroit, Mich. C. Wood Davis.

[For the Country Gentleman and Cultivator.]

FEEDING COTTON SEED MEAL.

S. A. P., in the No. of the Co. Gent. for March 15th, asks for experience in feeding cotton seed meal. He shall have mine.

Winter before last I had no corn to feed to my cattle, and I procured from St. Louis a ton of the cotton seed oil meal. I commenced feeding to my cattle about a pint at a feed. This I increased until they received by the second week about a quart at a feed.

The cattle, consisting of three yoke of work cattle, one bull, two cows and a calf weaned, improved wonderfully. They became fat and sleek. The cows increased the yield of milk in two weeks to double the quantity given before the oil meal was fed. They came out in the spring in tip-top order. As an adjuvant in feeding, or in place of corn, or with it in moderate quantity, I consider it an invaluable feed. To those who wish to fatten cattle during winter, I can recommend the use of cotton seed oil meal.

Prairie Cottage, Ill. H. Hinkley.

[For the Country Gentleman and Cultivator.]

SHEEP---COARSE WOOL vs. FINE.

At a recent meeting of one of the Farmer's Clubs in Maine, during a discussion of some questions connected with sheep husbandry, Mr. R. A. Davis made some interesting and important statements in regard to the cost of keeping and comparative value of the fine and coarse wooled breed of sheep. In the course of his remarks he gave the substance of a conversation with an intelligent farmer in an adjoining town, who kept a flock of 20 of the native breed of coarse wooled sheep. They weighed on an average 100 lbs. per head, and required 3 lbs. of hay each day. The average clip of wool per head was 3 lbs., which sold for 38 cents a lb., making $22.80. From the 20 sheep, sixteen lambs were sold at $2 per head, amounting to $32, making in all a total of $54.80. Mr. Davis then gave some account of his own flock. He had 42 Spanish merino sheep, the wool of which averaged 4¼ lbs. per head. This was sold for 42 cents per lb., amounting to $74.97. Of his flock 27 were ewes, from which he raised 25 lambs. These were not sold, but he estimated their value at $2 per head, making $50, which added to the wool makes a total of $124.97. In keeping his sheep Mr. Davis had weighed their hay, and found them to consume an average of 2¼ lbs. per day; and by following out this figuring, he had demonstrated that 26½ fine wooled sheep could be kept for the same that it would cost to keep 20 of the coarse wooled; thus making a difference in a year in cost of keeping, lambs, and advanced price of wool of the pretty sum of $40! This Mr. Davis considered quite an item. S. L. B.

PLAN OF GROUNDS.

A western correspondent furnishes the accompanying plan of a residence and its surrounding grounds, (fig. 1,) which, on being laid out and planted, are found too stiff to prove satisfactory, and requests a better plan. The country around the house is rolling prairie. The house is situated on an eminence commanding a view of the town a mile distant, towards *a*. The scenery is quite similar in all directions. The trees shown in this plan are mostly newly planted and may be removed.

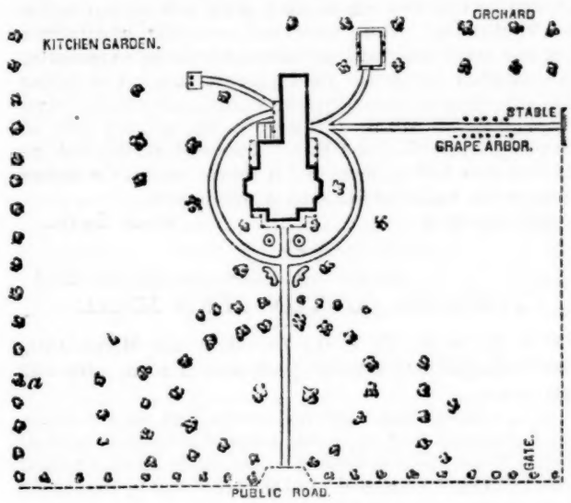


Fig. 1.

In designing a plan, there are many circumstances to be taken into consideration, all more or less modifying the result. The undulations of the surface must be known in order to fix properly the position of the roads and walks. As we do not possess this information, the position in which we have placed them must be merely suggestive. The amount of labor to be expended in keeping the grounds in order, is another important consideration. If broad spreading trees only are to occupy the lawn, and the grass is to be kept short by sheep, the expense will not be a hundredth part of the amount required to mow the lawn weekly, so as to keep it like velvet, to dress off the walks with mathematical precision, and to keep trees, shrubs, and brilliant flower beds in the turf, in the highest state of culture and finish. We do not suppose that any one asking us for information on this subject, would adopt the slovenly mode of allowing the grass to grow up for hay, to be cut but once a year, on a space like this of but two or three acres. We infer that our correspondent intends to adopt the middle course—to plant only the more thrifty growing trees, and hardy and vigorous shrubs near the dwelling, and to keep the grass mowed frequently—say once a week in early summer, and once in two or three weeks later in the season.

Fig. 2, exhibits the plan we propose as an improvement. We have made it as simple as practicable—laying down but a single carriage road, and a few short walks. A more elaborate plan, and of more costly execution, would have included various walks over the lawn, now intended to be merely traversed in the short grass. Most of the walks in immediate proximity to the house, are such as utility demands, and they are skirted with the smaller shrubbery; or, if desired, with circular or oval flower beds. But the latter must be kept in the neatest trim, and occupied with continued bloomers, or they will appear worse than none. We omit the grape arbor on the road to the stable, as being

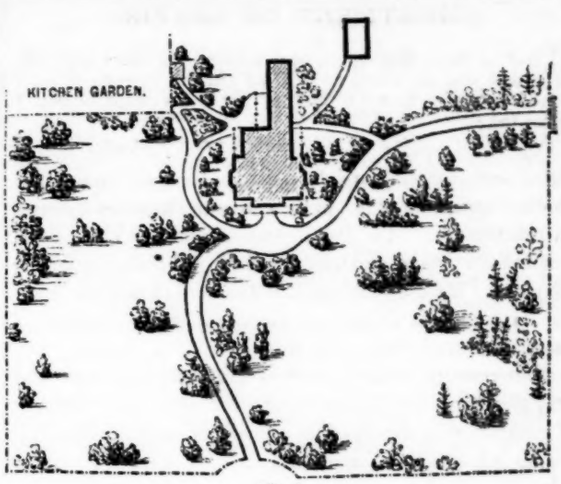


Fig. 2.

unsuited at that place, where the vines could not be properly cultivated for successful growth.

In a minute working plan, the position of every tree and its kind, would be given. This reduced figure precludes such minuteness of detail—the engraving will show the style of planting; selecting the trees, and adjusting their position will afford an endless exercise of taste and skill. Some hints will be found on this subject in the Register for 1860, p. 250, 251, &c. The mode of transferring the plan from paper to the ground is given on p. 245 of the same work.

[For the Country Gentleman and Cultivator.]

FARM ACCOUNTS.

The importance of farm accounts is well insisted on in THE CULTIVATOR, and it is hoped that those who have the matter in hand will prepare a system which will be so simple and convenient, as to commend itself to all young farmers. It must be simple, and it is entirely unnecessary that it should be anything else. One would suppose it a very easy thing to keep the debt and credit of a farm, and show the balance at the end of the year; and so it is; but many fail, as we see, from not understanding the subject, and some from attempting too much—getting the accounts mixed, which should be kept entirely separated.

The object of farm accounts is to find the income and expenses of the farm, and they are not, therefore, to be confounded with the expenses of the family or with any other expenses or income. A good householder will keep an account of his family expenses, but will not have them confounded with other expenses.

Is there any difficulty in keeping a record through the year of all the expenses of the farm and of all the income from it? The income is all that is sold from the farm or consumed by the family. The expenses are for labor, repairs, seed and manure bought, taxes, &c. In regard to most of these, there would be no difficulty in keeping and footing the account. In regard to some items, the young farmer might have some doubt where to put them in the account. If he has, for instance, expended something upon his buildings, he might question whether that should go into the expense columns, as repairs, or whether it is a permanent improvement, making his farm so much more valuable permanently. If it is only so much as to keep up the general repairs of the buildings, the money expended in it may be carried to "repairs" or "wear and tare," as some say. But if he makes an addition to his buildings, or sets a young orchard, or drains a part of his farm, the money he expends in it should be put down in the column of expenses, and the cost of it, in money and labor, should be set in the column of "income," as worth so much to him permanently. He has got it yet, only he has taken out of one pocket and put it into the other. If he should buy a fine carriage for his family to ride in, he

will not charge that among the expenses of the farm. It has nothing to do with the income or expenses of the farm. Neither has any other item of family expenses, their food, clothing, education, traveling expenses, or benevolent gifts. The board of the farm hands, whether in the farmer's family or in their own family, should be charged among expenses, the same as labor. Also the value of the labor of the farmer's sons. His own salary is the nett proceeds of the farm, above the interest upon his capital used.

Some advise to keep debt and credit with each crop, and each animal or lot of animals. This is very well, and helps form an estimate of the profits of different crops, &c.; but we cannot foot up the profits of the year by that method.

Some charge the farm at the beginning of the year with all the stock and implements of the farm, and at the end of the year give credit for the stock and tools, the difference showing the increase or decrease. This is right; but I prefer as more simple, to set down only the difference in the inventory at the end of the year, compared with the beginning, in the column of expenses if there be a decrease in the valuation, and in the income column if there be an increase in the valuation.

If the farmer would show all that the farm is worth to him, he will add to the nett proceeds the rent of his house, the value of the prepared fuel taken from the farm, and the value of those conveniences of riding about and traveling which his horses afford, and which do not belong to the business of the farm.

It ought to be presumed also, that a good farmer will add something to the value of his farm every year by a course of general improvement.

I had supposed that there was no need of any published system to aid young men, in a matter so simple, but in some efforts to point out a method to an inquirer, I am led to wish for some plain manual, which may give examples to those who wish to study the subject.

My own practice is this, which may not be the best, though I have followed it with entire satisfaction, ever since I began to take the Cultivator, which was with the first number.

I keep a book, in which I enter every receipt and every payment through the year, whatever it may be, with date and circumstances sufficiently particular to make it clearly understood. This book is of itself a valuable record. If I have a considerable account with any one, as with a hired man, I keep a separate account of debt and credit with him, and carry the footing only into my first named book. At the end of the year, I have only to carry to its respective column each item of income or expense, whether it be of the farm, or the family, or any other. I have then, ready to be footed, the income of the farm, the expenses of the farm, the expenses of the family, and any miscellaneous income or expense which may have accrued. This summing up at the end of the year requires but a few hours of time, and but little skill in book-keeping. And the information thus put into tabular form will be so valuable to any young farmer, that he will be very unwilling to relinquish this practice, after the experience of a year or two.

Every young farmer should keep also a book for memoranda of various things connected with the farm, the date of the different operations, experiments which he has made, especially his mistakes, notes on the seasons, the arrival of birds, the time of flowering of certain plants, &c., &c. It will be of great value and pleasure to him hereafter. I hope these hints may lead some to make a trial of farm book-keeping. N. Reed. *Amenia Union.*

P. S. I ought to have said in my communication on "Farm Accounts," that the "end of the year" is to be considered the last of March, and not as some literally reckon, the last of December. The farmer's year must begin on the first of April, and he can scarcely close his accounts to any other point.

What good would centuries do the man who only knows how to waste his time?

Transplanting, Pruning and Watering Trees.

Messrs. Eds.—I propose planting an orchard of young apple trees this spring, and as one principal cause of failure in transplanting, is the excessive evaporation of moisture from the branches and trunk, which waste the mutilated roots are not able to supply, a severe shortening-in of the head is recommended. In connection with pruning, would it not be a good way to check evaporation, by *bandaging the trunk with straw* at time of planting?

I have also apple trees planted last spring, which I am compelled to bandage every fall, to prevent their being girdled by rabbits. Would it be an injury to these trees to leave the straw sheathing on during the summer? Also, give me your system of planting dwarf pears.

Lebanon, Pa. Geo. W. Kline.

Many newly set trees perish by the large evaporation through the bark before the leaves expand. This is the only way that moisture escapes from them during this period; and as there is but little circulation, and the roots are torn and feeble, there is but little moisture absorbed through the roots. Watering at the roots is consequently of little use at this time—indeed, the roots are sometimes soaked and rotted by too much watering before circulation equalizes its distribution. Hence, it is important to wet the bark of the stem and branches, which may perhaps be most conveniently done by a thin and light sheathing of straw kept properly moist. The same end has been efficiently accomplished by merely washing the bark several times a day, without the aid of any covering. Trees, badly wilted, and affording little promise of living, have thus been induced to grow finely, when no other treatment could have restored them.

After the leaves are expanded, everything is changed. The leaves throw off moisture rapidly, the circulation is rapid, sap flows in at the roots, passes up the wood of stem and branches into the leaves, elaborated juices are sent down through the bark, and new wood and new roots are rapidly formed. There should now be plenty of moisture at the roots, to supply this rapid consumption; yet it is rarely advisable to apply water. A well worked mellow soil will furnish it best. If water is poured in at the foot of the stem, there is too much of it; and settling the earth and causing it to harden and bake, there is too little of it in a short time. This constant succession of flooding and drouth is extremly unfavorable. If water must be applied, take off the top soil, pour in the water, and then cover up again with well pulverized earth. But the best of all means for its supply is, to provide a broad deep bed of mellow soil, in which the tree stands—this will furnish regularly at all times, just what is wanted and no more; and holding it like a sponge will contain a large quantity—many pailfuls within the reach of the roots of a young tree—without soaking or flooding the soil.

[For the Country Gentleman and Cultivator.]

HAY CAPS.

Few of our farmers are aware that the very best hay caps can be made from the common seamless bags made by the Lewiston Bag Co. and the Stark Mills, and others. By slitting one side and the end, and hemming the raw edges, you get a hay cap 42 by 40 inches, of a thicker and stronger fabric than you can purchase in any other form. The bags are retailed at 25 cents each, and need not be cut up until used as bags, and have begun to give out at the corners.

I think the fabric the very best that is made, for the purpose, and have often wondered that the manufacturers did not make a heavy single cloth for the same purpose.

Brookline, Mass. E.

HORTICULTURAL NOTES.

Protecting Trees from Mice and Rabbits.

Some time ago I noticed in THE CULTIVATOR, a plan for protecting fruit trees from mice and rabbits, by simply tying a newspaper round the bark, so as to cover it about eighteen inches from the ground. This I have tried for three years, and none so secured have been injured, while others were destroyed. The paper is, however, liable to get wet and become torn, and it is necessary to heap up some fresh earth around the tree, or the mice may get below it. Last year a farmer suggested to me an improvement, to make boxes about 18 inches high of different sizes, for large or small trees open at top and bottom, and one side off, until they are placed around the bark, when that side is either screwed or nailed on. I had a number made, and placed round the most valuable trees. They appeared to be a complete and effectual security, not a tree being injured. They were about an inch under ground, or a little earth thrown up around them. This spring I took them off and laid them up for next winter, just as good as when first put on. The only possible way a tree thus secured could be injured would be either by a mouse getting under the box, (but this they will not do if some fresh earth is thrown around it,) or a rabbit standing on his hind legs and reaching the bark above the box, but if eighteen inches is not sufficient, they could be made two feet in height. The cost is very trifling, when they will answer for a number of years; I found it easier to tack on the side board with a few small nails, than to take the time to screw them on.

The Yellows in Peach Trees.

Mr. ADAMS, an intelligent and observant farmer of Cumberland Co., Pa., stated to me that he had a number of peach trees on his farm affected by the yellows; that one day, while one in his employ was plowing, he took up a considerable portion of the root of one of the diseased trees, and was surprised to notice the root some distance under the ground presenting a white silvery appearance, which on careful examination proved to be minute white worms. He then took up roots of other peach trees in the same locality, affected with the yellows, and found the roots some distance from the trunk, exhibiting the same aspect.

So limited an instance would not warrant any conclusion that these worms were the cause of the disease called the yellows; indeed it would be hardly possible that such should be the case, and not have been discovered in the many orchards which have perished in this way. It is more likely that these worms infested the roots in *this locality*, and had no connection with the disease which destroyed the trees; but the fact is worth noting, as it can be easily tested, where trees are thus diseased, by digging up the roots for some extent, at different seasons of the year.

The Borer in the Hickory.

The same gentleman says he has noticed a winged insect about four times the size of the common wasp, possessing a powerful sting, perforate the hickory trees, and deposit in such excavation its eggs; and that when the wood decays, the young come forth by thousands; by these perforations the tree ultimately dies. The remedy is to examine the trees, and wherever they appear, to cut down the tree and destroy the nest, just as we would do the caterpillar, so as to prevent their spreading; if neglected, the damage to a body of hickory trees will be very serious to the land owner.

This insect cannot be the same with the apple borer.* Mr. A will send you specimens if requested.

The Curculio.

The curculio is very averse to the smell of burning soot. The same gentleman says he has preserved his plums by burning soot under the trees at the time this insect commences his ravages. We hope that some of your readers will make the trial and give the result. H.

*Thomas says of the apple borer—"The perfect insect is a brown and white striped beetle, about half an inch long, which flies at night. It deposits its eggs late in spring or the first of summer, in the bark near the surface of the ground, and sometimes in the forks of the branches. The first indication of its presence is the appearance of numerous small round holes, as if the bark had been perforated by buckshot. These holes will soon become more visible by the ejected dust." Page 129.

THE AUSTRALIAN BEE.

I think the Australian bees would suit your correspondent C. P., as they are without a sting. I am sorry I cannot give you the natural history of the insect, as, during my stay in Australia, I was more a collector of insects than an entomologist. However, I remember they were a small black insect, about the size of a small house fly, and when at rest their wings lapped one over the other, and void of all sting; but though small in stature, they were legion in numbers, and collected vast quantities of the purest honey. It would appear like a traveller's tale were I to tell the vast amount of honey I have seen taken from a swarm of these bees in a huge gum tree, (Eucalyptus.) A friend of mine hived a swarm of them in a common hive, from which he got a second. He said they did well, and offered me one to take to England. Since then they have been received in that country, but of the results there I am unable to say.

I should think they would do well in the southern States, but of course the north would be altogether too cold for them I should also think that the climate of England would be too humid for them.

To me, like your correspondent, the sting of a bee is poison, and it would certainly be a great consideration could we naturalize a stingless sort. E. H. COLLINS.

Onondaga Co.

Recipe for Cottage Pudding.

MESSRS. EDS.—As I consider the recipes contained in your paper worth the price of subscription alone, I will, as time permits, add a little to them and other matters occasionally; and as I am considerable of an epicure, I will commence with a recipe for a cottage pudding, which every person having a cow may have with little labor, and but very little expense, and which but few who use it (especially in hot weather,) would be willing to do without.

Take 3 quarts of milk to 1 quart of flour—one-half of the milk to be put on the fire and brought nearly to boil—then the other half of the milk with the flour, the flour well blended in it—stir into the pot on a slow fire, and keep it boiling for one hour; or until it is as thick as good paste, when you must add a small teaspoon of ginger and salt, and pour into shallow dishes to cool; when it will cut like good jelly, serve up cool with warm milk in winter, or cool in summer.

P. S.—You can make enough at one time to do any size family five or six days, if kept in a cool place, and if you wish to make it as good and more wholesome than any other pudding, add a little vanilla or other syrup while warm, and serve with a spread of strawberries, peaches or jellies, or any of the fruit butter and cream. Try it, mothers, daughters and servants, and my word for it, you will away with sago, corn and other puddings, but be careful to stir it all the time, or you will scorch it, and then it is done for. J. B. C.

Diamond Plaza, Pa.

COAL TAR FOR PAINTING.

EDITORS CULT. AND CO. GENT.—I notice in your paper, an inquiry from a subscriber, what is the cheapest and most durable paint for old buildings? Having had some experience in such matters, I would say coal tar is the cheapest, the most durable, and the best looking paint for old buildings, in the market—especially if painted white around the doors and windows, the barge boards and corners of the building, with white lead. It gives the building quite a tasty appearance, and at less than half the cost than if painted with any kind of oil paint.

As to the cost I will give you my experience, as I have two barns, one 38 by 40 feet, the other 28 by 44 feet, wagon house 26 by 51 feet, with several other small buildings, such as hog-house, wood-house, smoke-house, &c. I used two barrels of coal tar in giving them two coats, which they should always have to give them a handsome, glossy appearance. The tar needs no preparation, but use it just as it comes in the barrel, cold, putting it on with a large round brush. I also used about 50 pounds white lead and 3 gallons oil. The white lead should always be painted first before the tar. The labor of putting on was ten days, at $1.25 per day.

RECAPITULATION.

2 barrels tar, at $3.50 per barrel	$7 00
50 lbs. white lead, at 8 cents per lb	4 00
3 gallons oil, at 70 cents	2 10
10 days labor, at $1,25 per day	12 50
Total	$25 60

Making $25.60, which is certainly cheap enough, and which will last and look good for twenty years. JAMES OPIE.

Farmers Should Teach Each Other.

☞ What Farmers Want is a question much discussed, and people try to answer it in all sorts of ways—some with this prescription and some with that—one with Science, a second with Colleges, a third with Governmental aid, a fourth with Societies, and it may be a fifth with Agricultural Papers. Two lines which we have chanced to find in a late number of the London Agricultural Gazette, are worth many long treatises upon this subject, because they point to precisely the end which all these prescriptions should have in view, and without which none of them is good for much.

In speaking of the recent appointment of a new editor of the Royal Agricultural Society's Journal, it is remarked that he can only "succeed in the discharge of his duties in proportion, not as he brings the maxims of French, of German, of Italian, or of Roman Agriculture to bear upon his readers,—not as he uses any influence from without to modify the practice of the English farmer, *but just as he shall succeed in inducing and enabling English agriculturists to teach other.*"

To induce and enable American Farmers to teach each other—would be the best motto that our Agricultural Science could assume. To *induce*, because unless practical experience leads the way, she cannot follow to systematize and to explain—to *enable*, because every forward step she really makes, is a forward step for practice. The two cannot be divorced, and neither admits of deception and unsoundness in its fellow—but, hand-in-hand, each countenacing and promoting the efforts of the other, they may together find the path of true success. And we have still, in a great measure, to anticipate such concordant effort in this country; we have heretofore been mostly importing the fruits of foreign investigations, and are only by degrees entering upon them for ourselves. Dr. Fitch, in Entomological Science, for instance, has in this State made a right beginning, and we have long thought that if the State, in connection with our Agricultural Society, could be induced to extend similar encouragement to other branches of agricultural science, at least to chemistry—great good might be gradually effected.

And so we might go on to show, that whatever we hope of actual use to our agriculture, either from institutions of Education, from Governmental aid, from our Societies and their Fairs, or from agricultural Reading, can only be accomplished just in that proportion in which the farmers themselves are induced and enabled to teach each other. With this end in view they secure at once a broad foundation for their labors; without it, we may have large and even well filled halls of learning, in which the farmer has no share; grants of land, that go mostly to politicians; societies that sacrifice every design of good with which they were founded, to some outside object or private interest; agricultural books got up to sell, and "agricultural" journals of interesting miscellany.

We might bring the same lesson down to individuals. Every farmer who sets a good example is doing something to teach those around him. But he may very largely extend the sphere of his influence, and, "in giving, gain," if he will more actively contribute to induce and enable his neighbors to obtain similar means of improvement—for example by supporting in harmony and with some measure of public spirit, local or general societies and clubs, by extending the circulation of agricultural journals, and by giving through them the fruits of his and their experience.

To revert once more, to the article from which we have taken a text, because it struck us that it might be made suggestive of thought—all the well known English writers on Agriculture appear to feel slighted, not only in person, but in class, by the sudden elevation to the leadership among them of a man never heard of before by the farmers of the country. The new editor of the Royal Ag. Society's Journal appears to have been appointed entirely upon "red tape" grounds—as having had family influence in his behalf to outweigh the merits of all the other candidates, of whom Mr. Morton, of the Ag. Gazette and editor of the Cyclopedia that bears his name, was one of the most eminent. The fortunate appointee, a Mr. Frere, was only with some difficulty carried against the opposition of such men as Hudson, the Castle-Acre farmer, and his compeers, and the selection seems to have met with criticism so general and apparently so well deserved, that we should imagine it difficult for him long to retain the position, unless the desire of a rather unusually comfortable salary outweighs motives of delicacy, or leads to unusual exertion to give satisfaction and "conquer success."

[For the Country Gentleman and Cultivator.]

GAIN IN FEEDING CATTLE.

Near Geneva, April 7th, 1860.

Messrs. Tuckers—I have sold and weighed to-day, a few fat cattle, and will give you the weights when put up last Dec. 3d, and their gain since. It may give some of the young farmers, who are frequently making inquiries about feeding, some idea what they may expect from buying good cattle; but I confess that the gain this year and last, is greater than is generally got.

Two steers weighed together Dec. 3,	2,785 lbs.	—gain 435.
Two do. do. Dec. 3,	3,060 lbs.	—gain 585.
Two do. do. do.	2,030 lbs.	—gain 280.
One extra fat cow, Dec. 3.	1,380 lbs.	—gain 115.

These cattle were weighed 3d Dec., with *full bellies;* now they had *neither food nor water for* 14 *hours* before weighing. If they had been weighed when full, it would have made the gain 45 to 50 lbs. more on each animal. The cow was very prime beef when put up; consequently she gained little.

The Hon. A. B. D. will see that what I argued at Albany is proved by practice—that the larger the cattle the more they gain on the same amount of meal, as the above cattle were all fed an equal quantity of meal; I expect Mr. D. will say that the large ones would eat most hay. Perhaps that may be the case, as it was not measured out to each beast like the meal; but I don't think they do. I weighed 15 cattle to-day, and found the largest always gained most.

I have a fat pure blood Hereford heifer, being the first I ever fed of that breed. She is so fat the drovers say they would not risk taking her to Albany along with other cattle; they say that there is such a mass of fat on her that the other cattle would bruise her so as to ruin her sale. If all the Herefords feed like her, our friend Sotham never said half enough in their favor; but they cannot be all like her, else there would be no other cattle kept for fatting purposes. I have also a grade Hereford steer, which will be three years old the 23d of this month. I have no doubt he weighs over 1,800 lbs.—will weigh him on his birth-day. If he goes much over 1,800 lbs. it will be made public.

John Johnston.

[For the Country Gentleman and Cultivator.]

FEEDING CUT HAY TO HOGS.

Messrs. Editors—On the 24th of last Sept. I bought two pigs, four weeks old. They were kept on skim-milk until about the 1st of Jan., when the quantity of milk falling short, I commenced feeding cut hay—clover and timothy—and have continued to do so until the present time (April 9th.) I never wintered hogs so easy and cheap. They have grown finely, and are thrifty handsome fellows.

The mode of feeding is this:—In the morning, after feeding, about four quarts of hay, cut fine, is put into the pail, together with a pint of barley-meal, then boiling water sufficient to wet and scald it, when well stirred up. After standing a while, the pail is filled with milk and dish-water—this is fed to them at noon, at which time the same dish is prepared for them at night, and then, another for the morning. Scalding the hay in this way, makes it tender and sweet, and is readily eaten.

I think this a very economical way of wintering hogs. At any rate, I never had them do better than on this feed.

Jefferson Co., N. Y. J. L. R.

Inquiries and Answers.

DRAINING WET LAND.—I have a piece of land on my farm, that is wet, and holds water until late in spring; it is a side hill, clay subsoil. Will it do to underdrain it? What will the tile cost to drain about five acres; and do you think it will pay? Our lands are generally a black limestone land, as it is called. R. *Franklin, Tenn.* [It will not only "do" to drain it, but it will not do to let it remain undrained. Very probably it will increase its value at least ten-fold. Two inch pipe tile, which will be large enough for eighty rods in length, or an equivalent, under ordinary circumstances, (see *Register* for 1859, article *Draining*,) may generally be had at the manufactories for about ten dollars per thousand—they are 12 or 14 inches long. Our correspondent may quickly figure how many will be required for an acre, with drains two rods apart; and also the cost of transportation from the nearest manufactory, each piece weighing two pounds or so. From these data he may easily determine the cost per acre. No doubt it will "*pay*" well; ultimately, if not immediately.]

CLOVER AND PLASTER.—I have a field of some twelve acres, which I wish to manure previous to laying down to pasture. It is too far away to haul out manure, and I intend sowing clover and plaster this spring and plow down, seeding with grass next spring. What I wish to inquire is, the amount of red clover and quantity of plaster I should apply per acre—when the best time for sowing each and right stage to turn under? HARRY. *Sunbury Co., N. B.* [Clover seed should be sown very early in spring—or it may be a little later, if lightly and evenly brushed in. Or, if sown on newly plowed and evenly harrowed land, it may be covered by means of a roller, which presses the seed in and crumbles the surface. This mode does well, if performed quite early, and is followed by rain. Brushing in is best for late sowing. There should be at least one peck of seed per acre. There will be a good growth by the end of summer, when it may be plowed in, but it would be more profitable to wait another year, when the roots will be larger and the crop heavier. It should be plowed in just as the blossoms are disappearing, and before the stalks become dry. Plaster should be sown early in spring, at the rate of one or two bushels per acre.]

SHERWOOD'S GRAIN BINDER.—I noticed, some time since, in a daily paper, an article headed "Joy to Farmers," in which it was stated that an apparatus had been invented, and successfully operated, as an attachment to the reaper, for binding the grain into sheaves. Can you inform me if such an invention has been produced; and whether one can be had the present season? A FARMER. [A machine for binding grain, attached to any common reaping machine, has been invented by ALLEN SHERWOOD, of Auburn, N. Y., to whom application may be made for information. We have witnessed its successful performance in the harvest field, an account of which will be found in the 14th volume of the Country Gentleman, p. 121; and a figure and description were given in the 13th volume, p. 330.]

PILFERING OF CHICKENS—BEST CULTIVATORS.—Can you or some of your numerous readers, give a mode to prevent the chickens from plucking up the corn, as I wish to plant a field in corn near the barn. To shut them up would be quite a task. I have seen a number of plans given, but do not know if they can be relied on. Also who manufactures the best horse-hoe to work corn with, and the price. LEVI HAWK. [We know of no chicken remedy for the purpose proposed. The best cultivator *teeth* which we have ever used are those made by SAYRE & REMINGTON, of Utica—they are steel—are light, strong, efficient, and are sharp till worn out. The best cultivator in *form* is that constructed by MILTON ALDEN, of Auburn, N. Y. It has thills which give the workmen a surprising control of its depth and accurate working. Both these we think are furnished for about eight dollars each. We figured the latter in our last volume.]

WILLOW CULTURE.—Will you or some of your correspondents please inform me through THE CULTIVATOR, of the plan to pursue in order to successfully grow the Osier willow? R. B. U. [For an article on this subject, see Cultivator for Jan. 1858, p. 22.]

MANURE CELLARS.—Will some of your correspondents who are soiling, explain how they construct their manure cellars, so as to answer their primary purpose of saving manure, and the secondary one of fattening swine? How do the porkers get in and out of the receptacle? When soiling a dozen cows in as many stalls, under a shed, with the stall doors opening to the south, into the barnyard, (the front of the shed forming part of the north boundary of the yard) where ought the manure cellar to be? W. J.

LICE ON POULTRY.—Could any of the readers of the Co. Gent., or its publishers, tell us how to destroy the lice on fowls effectually? If so, you would do me a great favor by publishing it in your next. J. K. [Apply sweet oil to the top of their heads, under their wings, and elsewhere. Another remedy is to mix, say half a pound of sulphur, with several quarts of feed, and allow them occasionally to eat it. Indian meal would probably be best. We should prefer the oil remedy—which might perhaps be modified by substituting lard. But the best of all remedies is *prevention*—effected by thorough cleanliness—whitewashing the hen-house, and keeping every part constantly clean.]

ESTIMATING HAY IN BULK.—What number of tons of hay will the bay or mow, as we call it, hold, when well settled, dimensions as follows—17 by 32 feet, 16 feet posts, and 14 pitch to the roof? A. W. [The rule given by different writers, to estimate hay in tons by the bulk, varies greatly. We have seen in an agricultural paper claiming reliability, the statement that 700 to 800 cubic feet are required for a ton of common hay, which is obviously beyond all bounds. The bulk varies with the kind of grass, time of cutting, degree of curing, and depth of the bay; nevertheless, we think the following rule a fair average: For clover hay packed solid, about 325 to 350 cubic feet; good timothy about 275 cubic feet, but under a very heavy pressure, one-fourth less. This rule should vary considerably with circumstances. The bay mentioned by our correspondent would contain over ten thousand cubic feet, and would therefore hold from thirty to forty tons, well packed away and carefully stuffed full.]

VARIETIES OF THE RED CLOVER.—We have three varieties of clover seed for sale here, termed the "large or Herkimer county," the "medium," and the "small" clover. I wish to know whether the "Peavine" clover, advertised in the Co. Gent., is the same thing as the "large or Herkimer Co.," commonly so called. How would the Peavine answer for soiling, say to follow the medium? Would it make a good succession? If I am rightly informed, it ripens later—if so, would it not be in its prime after the other has gone by? One thing more. Is Lucerne adapted to this climate, and would it be valuable for soiling purposes? Where can the seed be obtained—at what price, and how much would it require to the acre? J. L. R. [The clover, like other plants continually reproduced from seed, runs largely into varieties; and it would be difficult therefore to pronounce on the identity of any local sorts without comparing the same in growth. There is no doubt that any of the larger sorts would do well for soiling—those which run largely to stalk would generally mature later than the dwarf kinds. Many high recommendations have been given of Lucerne, and many experiments made with it—but that they are generally unsuccessful is shown by the fact that its cultivation has not been extensively adopted or permanently carried on. The seed may probably be had of J. M. THORBURN of New-York, but we do not know the price.]

☞ *S., Medway, Mass.*, should subscribe for the COUNTRY GENTLEMAN, where he will find the subject about which he inquires, more fully discussed than the limits of THE CULTIVATOR will allow of our doing in its pages.

TILE-DRAINING.—Do any of the tile manufacturers in your city, ditch and lay the tile? Can you tell me the cost per acre, the drains to be 33 feet apart? There is not a rod of tile-drains in this town, and no factory for making tile in the vicinity. All the tile laid in Worcester are brought from Albany. C. W. G. [There are no tile manufacturers that cut ditches and lay tile for others. The cost of tile-draining per acre, the drains 2 rods apart, and 3 feet deep, the ditches being cut by hand, will vary with circumstances, but may be set down about as follows, as an average:

Digging 80 rods of ditch, 30c. per rod,	$24
Tile, about 1120, 14 inches by 2 inches in diameter,	12
Laying tile and plowing in the earth,	3
Total,	$39

One-half the cost of digging the ditches will be saved, if a drain plow is used, reducing the cost from $39 to $27; and when the soil is favorable, and tile only $10, as in some places, the cost would be still less. If brought many miles by railroad, the expense would be increased.]

WHAT AILS MY FOWLS?—When first taken, they act as if trying to swallow—then whirl around like a shaker dancing—others keel over, like a gymnast—and at last become stone-blind, seeming to lose all command of the head. They will eat heartily, though it is with great difficulty they pick up their food, the head flying off first one side, then the other. C. W. G. [This disease may be the *vertigo*—caused perhaps by overfeeding or improper food. We never had any expe-

rience in its cure—but Bement says that holding the head for a moment under a stream of water, arrests the disease, and caster oil removes the tendency.]

VARNISH.—I wish you would be so kind as to give me a receipt for varnish, through THE CULTIVATOR. A SUBSCRIBER. [Varnish is usually made by dissolving gum copal in turpentine, with the addition of some drying oil. But we are unable to give the exact process or proportions, as it is so much easier and cheaper to buy the varnish ready made, which is usually kept by all dealers in paints and oils, and by most druggists.]

GRAPES MIXING BY CLOSE PROXIMITY.—Being about to put out a number of grapevines, with the view ultimately of training them to an arbor, I wish to make the following inquiry. The vines will be placed about ten feet apart on each side of the trellis or arbor, of different varieties of fruit, viz., Delaware, Diana, Rebecca, and Anna. Now, being placed in such close proximity, whether there is not a probability of their hybridizing so as to change the character of the fruit? T. [There is no danger of the fruit mixing or being changed as suggested. Each flower will probably fertilize itself, but if it does not, and its neighbor performs the office, it will not affect the *berries*, but only the *seed* they contain.]

HORSES AND HOGS.—Is it injurious to horses to have hogs kept underneath their stable to work over their manure? J. B. [Horses, to be healthy, must have pure, fresh air—and if the fumes of the manure are allowed to come up from below and load the air and taint the food, the result cannot be beneficial. A perfectly tight floor will exclude the vapor.]

SALT FOR WHEAT.—I wish to try an experiment with sowing salt on wheat this spring—how much should I sow per acre? JOHN JONES. *Golconda, Ill.* [Sow from five to ten bushels—it is usually applied in autumn about sowing time, or soon after—but is said to have done well if applied early in spring.]

SALTING CATTLE.—W. B. inquires respecting salt for cattle. I would say to him that for a number of years I have summered from 100 to 300 head of cattle, and I salt them twice a week, all that they will eat, and I have never had one hurt by eating too much. I have found, in buying fat cattle that had not been well salted, that they never weighed, according to their appearance, as well as those that had been well salted. In the spring of the year I find an advantage in mixing ashes with their salt after they are put on grass. It is a help towards shedding the old coat and starting them to thrive.

Ohio Farm, Ill. J. W.

FEED FOR HORSES AND COWS.—Can feed for five horses and two cows be raised on nine or ten acres fair ground—(I have no manure to start with, and the ground is an old pasture pretty well run out)—and what rotation would you advise for that object? W. A. M'C. *Pittsburg, Pa.* [Some horses and some cows will eat nearly double the feed of others, and hence all general estimates can be only approximative. We understand our correspondent to ask if food for the whole year can be grown on the ten acres, to be applied wholly to feeding them. A horse will require at least three tons of hay to carry him through winter, and he should have 30 to 40 bushels of grain. A cow will need about two thirds as much hay as a horse. Consequently the five horses will require at least 15 tons of hay—possibly 20 tons—and the cows 4 tons—say 22 tons in all. At 2 tons per acre, (a good crop) eleven acres of meadow would be needed. Corn sown in thick drills, (at the rate of 3 bushels per acre,) will yield nearly three times as much fodder per acre, and may be fed exclusively to cows and partly to horses—which would bring the required land for the winter fodder within the ten acres—leaving a portion for raising the grain.

If our correspondent merely intends to support the animals exclusive of the winter season, the estimate would stand about as follows: Pasturage for five horses, if good, eight acres; for two cows, two acres—to which should be added two acres of corn fodder, &c., for soiling in autumn, and during any severe drouth which might occur in the latter part of summer. If the old pasture, "pretty well run out," could be plowed up and re-seeded *heavily*, (twice as much seed as usual, or more,) it would doubtless greatly increase the amount of pasturage.]

MANURE FOR FRUIT TREES.—Will you inform me, through the medium of your valuable paper, what is the best fertilizer that can be placed around the roots of fruit trees at this season of the year. Also, what is considered the best wash for the bark of apple-trees to prevent the ascent of worms and promote the health of the tree. L. C. T. *Tariffville, Conn.* [As a general application for all localities, stable manure and composts made from it, are most valuable and reliable. Autumn is the best time for application, but much benefit results from spring manuring, if properly spaded in. Rotted manure, or compost which has been made of equal parts of manure and turf, or manure and muck, and a small portion of leached or unleached ashes, say a twentieth part more or less, is a good fertilizer. We trust our correspondent will avoid the common error of applying manure in a small circle at the foot of the trees, instead of spreading it as far as the roots extend, which is generally as far on *each* side as the height of the tree. Soap suds, or ashes and water, make a good wash for the bark, but we know of no wash to prevent insects from crawling up the stems.]

MILLET.—Would you or some of your correspondents describe the difference between the common millet, *Setaria italica*, and Hungarian grass? My reason for asking for information is, that many of the farmers around here say there is no difference. I received a package of seeds collected in Japan by one of the officers in the expedition with Commodore Perry, in which was a small parcel of the common millet. During the progress of its growth, I noticed one head five or six times the size of the others. In place of a single spike this was compound. I directly suppressed the small to secure this one. I have one head before me now, eight inches long, and many of the side spikes one inch long; the foliage is large, fully half an inch diameter. Should it prove different from the Hungarian, I will increase it, and make it known. The horses and neat cattle are very fond of it. Mr. John Merryman, President of the Agricultural Society of Maryland, exhibited it at Chicago last fall, and a certificate of merit was awarded for it. SAM. FEAST. *Cockeysville, Md.*

[What we call "common millet," because most commonly cultivated, and generally known as millet, or German millet, is the *Setaria germanica*, not *italica*—and is the same as that sent out by the Patent Office under the name of *Moha de Hungrie*, and the same as the famous *Hungarian Grass* of Iowa. The annexed figure was drawn from a head of Hungarian Grass received by us from Iowa, and is undoubtedly the true German millet. The Italian millet, *Setaria italica*, differs from the above, in having a thicker stalk, and longer but much less compact spikes, being composed of several roundish clustered spikes. From our correspondent's description, we think it not unlikely that the single plant to which he refers may be the true Italian millet.]

[For the Cultivator and Country Gentleman.]

L. TUCKER & SON—In renewing my subscription for "The Cultivator," from its origin, under the lamented Judge BUEL, a quarter of a century ago—continuously to the present time—I take pleasure in bearing my testimony to its long continued usefulness, and the interest with which I receive each successive number by due course of mail, every one of which contains something both interesting and useful, and some especially so. Indeed, I have long considered it the *best* monthly agricultural periodical of our country. Though of course, where there are so many contributors, some of the articles bear evidence of theoretical enthusiasts, while on the other extreme, some of a rather fixed adherence to early and erroneous conceived opinions. But there are other writers, who aid much in "disseminating useful knowledge among men." There are men of science, of learning, of *practical experience*, and of clear and sound discriminating mind and judgment, of which latter—many are included, who have not been blest in their early days with as liberal an education as so many of the rising generation can avail themselves of—some communications from them are often among the most *practical* and *useful*, and I would *encourage* them, more especially as it is a greater *effort* for them to pen an article for the public eye, than from men of science and literature.

I have often felt strongly impelled to expose some of the fallacies of some writers, believing they often do much harm, but do not like to appear in that light—yet it certainly ought to be done by some one or more—while those that merit it, ought so to be set forth and sustained.

W. N.

[For the Cultivator and Country Gentleman.]

Clod Crushers, Book Farming, &c.

Eds. Cult. and Co. Gent.—"Do good and communicate," you say, and I say that if any one expects to, they must make a beginning. I will give a little evidence of the value of taking agricultural papers, which I began to take and read 18 years ago, and have not been without one or more since. I do not think it spoils the value of any information to go through the agricultural printing press as some do, although they would practice the same if it was told them by their neighbors. I often have got information from one number of your paper, and others, which was of more value than the cost of the paper for years. I will give you an instance of it.

The Clod Crusher which you gave a description of in 1858, and also the evidence of another person as to the value of it, in 1859. I drew on the meadow last spring a quantity of scrapings from the yard, which was mostly dirt, and could not be spread so but there was a great many lumps, both great and small; and remembering the articles above named I looked them up, (having kept all my back vols, and not used them for kindling wood as I have known some to do,) and went to work and made a crusher. I went to work with it, and the way it crushed and spread the lumps (doing more and better work in one hour, than three or four men could do in a day,) would convince those most set against book farming, that there is a profit in taking the papers; (and by the way some of them think they will have one made this year.) Mine had to do a great deal of work last year at home and at the neighbors, fitting land for grain and roots, and covering grass seeds. I think it is equal to its recommends by your former correspondents, although mine was not made after your pattern exactly. Not having any plank of the right shape, I made it out of common 2 inch plank, and if it was larger, it did its work well, and answered for a stone-boat to draw off the stone from the land at the same time.

Now if I could induce one or more to try it by calling their attention to it again, I should think I had done some good by trying to communicate. Would it not be well for you to give a description of it again?

The ink which this is written with, is also an evidence of the value of taking these papers, it being made from the receipt in the Feb. Cultivator, page 51, a quart costing only three cents. Book Farmer.

Vernon, N. Y.

Agreeably to the suggestion above, we reprint the description of the clod crusher alluded to. It was furnished for our papers by Mr. D. McCullock, of Loudon Co., Va.

Materials.—One scantling 3 by 4, and 12 feet long, to be sawed into three pieces—7 planks 5 feet long, and 7 inches wide, two inches thick on one edge, and the other edge half an inch thick; (sawyers can saw them by raising one edge of the log,) and one plank 1¼ inches thick, and 12 inches wide.

How to Make it.—Lay down the pieces of scantling 2½ feet apart; lay on one plank, thick edge to the end, take an inch auger and bore through the plank and scantling; countersink the holes through the plank with a chisel, so that the pins will not draw through; then take the next plank and lap it one inch over the thin edge of the other, and put the pins through so that they will catch both planks; when the last plank is on, slope off the scantling like a sledge runner; then put on the wide plank, turn over, wedge pins, bore a slanting hole in each piece about a foot from the front, to pull by. Put a chain of suitable length on the pins; hook your swingle trees to the middle; driver to stand on the hind end. If not heavy enough, put on stone. It does not answer well on stony land, because the stones don't break. If the land is wanted very fine, and once over is not enough, harrow up the clods, and go over again. Farmers living on clay loams will find this tool of great advantage. We use it after the harrow, and it saves one harrowing. It has several advantages over the roller—costs less, turns easier, pulverizes better, and levels.

COOKED FEED FOR HOGS.

Eds. Cultivator and Co. Gent.—I will give you my experience in feeding cooked feed to hogs.

I weighed five shoats—their gross weight was 566 lbs. Fed 150 lbs. wheat bran, cooked, in eight days—weight 628 lbs.—gain, 62 lbs.

Fed 280 lbs., or four bushels poor frost-bit corn, cooked, in eight days—weight, 646 lbs.—gain, 18 lbs.

Fed 245 lbs., or 3½ bushels secondq uality corn, cooked, in eight days—weight, 698 lbs.—gain, 52 lbs.

If I calculate right, the bran, cooked, at four cents per pound for the gain on the hogs, paid 33 cents per bushel of 20 lbs. The frost-bit corn paid 18 cents per bushel—that was as much as could be expected of such corn. Two of them were boars that I altered while feeding this corn; they gained nothing. The second quality corn paid 59½ cents per bushel. This corn would not have brought more than 30 cents per bushel in market.

Hogs at four cents per pound are below the market price here, but I calculated them at four cents to make the same figures.

Mr. Proctor's good corn, as reported in your paper some time since, paid three cents per bushel for the trouble of feeding; my second-quality corn paid 29½ cents per bushel for the trouble of cooking and feeding, and on the same quality of corn he fed, it would have paid 10 cents per bushel more. His gain is about the average of feeding on dry corn. J. Widney. *Ohio Farm, Ill.*

[For the Country Gentleman and Cultivator.]

Films on the Eyes of Cattle.

Messrs. Editors—I have seen inquiries about films on the eyes of cattle. I have never had a trial on cattle, but have cured or taken off films twice or three times from the eye of a young mare, by applying new milk from the cow two or three times a day for three or four days. Take a little in the mouth, and it is easily deposited in the eye. It is mild, easily tried, and not expensive. W. P.

[For the Country Gentleman and Cultivator.]

Ice Cream and Cake.

For "Jennie,"—and if she does not think it "excellent," she will differ from many others who do.

One quart good sweet cream—2 quarts new milk—2 teaspoons arrow-root mixed with two of good butter—1½ pounds white sugar, and the yolks of 5 eggs well beaten up.

Boil the milk, and stir in the mixture of arrow-root and butter, and as soon as that boils, set it off, and stir in the sugar and eggs, and let it cool. Then stir the cream in, and flavor with a little manilla, lemon, or what else best suits the taste, and then freeze.

The whites of eggs not used in the ice cream, will help to make a very nice cake to eat with it, called "Silver" or "Lady" cake. Half a pound sugar, 6 ounces flour, three ounces butter, whites of 5 or 7 eggs, well beaten, and flavored with extract of bitter almond. Lucy.

Burlington Co., N. J.

[For the Country Gentleman and Cultivator.]

CHEAP PAINT.

Messrs. Editors—Noticing an inquiry for a cheap paint to put on old buildings, in answer I would say I have had some experience in that line, and will give the desired information.

In the first place take some fine oil meal, mix it with cold water; then put it on the stove, and keep stirring till it boils. Then reduce it to the desired thickness with warm water. If you wish it white, stir in whiting, or any color you like. Apply with a brush, the same as paint. It fills the pores in the wood, so that after two coats it will cost no more to paint an old building than it would a new one. It penetrates the wood, and does not peel off like whitewash. It is never safe to paint over whitewash. It will last a number of years, as the oily nature of the meal keeps it from washing. A. B.

Damp Beds.—Mr. H. E. Stanley, of Stourport, Scotland, recently died at that place, from the effects of sleeping over night at Ross in a bed with damp clothes. Medical aid was speedily called but proved of no avail.

[For the Country Gentleman and Cultivator.]

Death of a Distinguished Agriculturist.

On the 11th of April Mr. B. V. French, of Harrison Square, Dorchester, Mass., departed this life at the ripe age of 69. His funeral took place on the 12th, at Dr. Starr's church in Braintree, where Mr. F. formerly resided, and was attended by a very large concourse of people.

Mr. Benjamin Vinton French was born in Braintree, July 29th, 1791—learned the business of a grocer—began trade in 1812, and followed it 25 years. As early as 1818 he began to interest himself in farming, and soon after became a landholder—enlarging his farm in 1824, and in 1836 gave up his business in Boston, after having acquired a good property by dilligence and assudity in his calling.

To prevent *ennui*, on quitting the busy marts of city activity, his friends advised him to furnish himself with a fishing tackle and a sporting gun, which he did, but found no occasion to use them for the purpose anticipated, for he found his rural employment ample for this.

His farm comprised about 200 acres, mostly under cultivation. It consisted of a great variety of soils, from the gravelly to the mucky. He inclosed his grounds with stone walls—the materials being taken from his fields—often trenching deeply before building the wall. His moist grounds were drained and made cultivable and productive.

He collected the meanwhile, the largest and most valuable Agricultural Library in the State—to which he added the best current Agricultural and Horticultural journals, both domestic and foreign. He was a constant reader of his books, magazines and papers—thus seeking to unite practice with science.

As a Pomologist, his judgment and skill were generally acknowledged. He had at one time over 400 varieties of the apple in cultivation, with as many pears—with large varieties of plums, cherries, and of the smaller fruits. This was done to test the varieties, for the purpose of determining the best for economical purposes or uses in cultivation.

He built a very costly barn—one which has been described in the Gentleman and Cultivator. Though it was deemed "a model barn" by many, yet it was too expensive for common farmers to imitate.

Mr. French was one of the founders of the Massachusetts Horticultural Society, the National Pomological Society, the United States Agricultural Society, the Norfolk Co. Agricultural Society, the Mass. Board of Agriculture, of which he was a member until a short time before his death; and by his influence an act was past by the Legislature in 1856, for the establishing of a Massachusetts School of Agriculture.

A short time before his death, the estate of Mr. French was found involved in irrevocable debt, and was sold at a terrible sacrifice, really not less than relatively. After his homestead and effects were sold, Mr. F. removed from Braintree to the place where he resided at the time of his death—and soon after opened a Farm Agency office, in North Market street, Boston, where he held constant and congenial intercourse with farmers in matters relating to rural economy—buying and selling stock, &c. He disposed of a part of his library to the State Board of Agriculture, a part to a gentleman in Boston, and retained a part down to the time of his demise. He was often heard to regret that he sold his books—such as had been his constant companions and silent counsellors for many years.

The death of such a man is a great public loss—leaving void a place that cannot be easily filled. He was a man of highly cultivated taste, of great enterprise and energy of character—an advocate of progress, and promoter of improvement in everything that concerned the welfare of society—remarkably genial and entertaining in conversation—always abounding in good humor—full of anecdote, and ever ready to communicate valuable information on a wide range of subjects. But Mr. French's work is done, and well done, in testimony of which, the Massachusetts Horticultural Society has decided to erect a suitable monument over his grave in Braintree. COLUMELLA.

CORN CULTURE IN KENTUCKY.

Eds. Co. Gent.—I would have written an article upon the cultivation of Indian Corn, some time since, but I felt it was like taking coals to New-Castle. A Hoosier correspondent, in your issue of March 29th, tells how they cultivate corn in his State; but makes his account so indefinite as to be of very little use to one needing instruction. I think, therefore, that the *precise* mode of cultivation, of some good practical farmer, would be much more to the purpose. As I have been at the business a good while, and have tried a good many plans, I will give an account of my practice last season, by which I produced six thousand bushels shelled corn on less than one hundred acres.

The land was all spring-plowed—which was done as deep as my teams could possibly draw the plows. Did not plow an acre of ground when too wet. Let patience have its perfect work in this particular. Harrowed when the ground was in proper order, with heavy two-horse diamond harrows, twenty-four teeth. Laid off both ways, three feet and a half, with one-horse diamond plow, as deep as horse could pull. Planted white flint corn, small cob; covered with hoe; plenty of dirt. Best field planted 10th of May.

Did not work my corn until it was stout enough to bear close severe plowing. Implement used was the one-horse diamond plow—narrow and deep, made to order—run the bar and split the middle. This is done twice in immediate succession, before leaving each field; then drop the plow and thin. (My land bears three stocks.) Then treat the next field in like manner until you get round the whole crop. By the time this is done, the first field is able to bear the mould-board. Throw two furrows, deep and strong—as deep as the horse can pull, and as close as the plow can get, and split the middle. Do this once, and proceed to No. 2, and so on. When you get through all, repeat this immediately. This will make four plowings, which is about all that we can do with 100 acres or more.

Our wheat harvest comes in here from the 20th June to 1st July, and our corn is rarely ever large enough to lay by at that time. The crop is almost always greatly benefitted by plowing thoroughly after harvest. Do not abandon the plowing on account of drouth. Plow—plow—plow, in dry weather—fear not.

As to other implements for cultivating corn, I have eight of the five hoe cultivators; and as to shovel plows, showers of them. These are all very good, but the heaviest crops I ever made, to wit—7,500 bushels and 6,000 bushels—were made without them.

Boon County, Ky. A Ky. Farmer.

COMPOSTING ANIMAL MATTER.

Editors Corntry Gentleman—Having noticed an inquiry in the Country Gentleman in respect to animals for manure, I will give you my practice. I have been in the habit of killing from 40 to 50 calves a year at four days old. I make a pen 12 feet square; then cover the bottom four inches deep with swamp muck; then place on the carcass of a calf, and cover it with one load of muck, and so on until they are all in—one two-horse wagon load of muck to each calf. If I lose a cow or any other animal in the course of the year, it is put into the heap, with the same proportion of swamp muck. When it has laid one year, I apply it to the land. According to my experiments, it is worth twice its bulk of stable manure. In 1856 I applied 25 two-horse wagon loads of stable manure to the acre on an old meadow, and plowed it in. Then I plowed a piece on one side of it without any manure, on which I applied about half as much of the animal compost to the acre as I had of the stable manure; then harrowed it all, and planted to corn; the next spring sowed it to oats and seeded it to timothy and clover. There has been quite a perceptible difference in each crop in favor of the compost. I could see a difference in color and in growth of each crop, for more than fifty rods from the field, for three years past. I did not harvest it separately to know the exact difference—the land and treatment all the same.

West Pawlet Vt. S. D.

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1860.

☞ We have given in another part of this paper some account of the feeding operations of Mr. Jurian Winne. Since our visit at his place, he has sold 100 of the sheep, and we find the following paragraph in the last market reports of the *N. Y. Times:*

At O'Brien's also, in Sixth-street, there were a few sheep on hand, of 1,434 received during the past week. Some of them were of prime quality, especially 100 State Leicester sheep fed by Jurian Winne, a few miles out of Albany. Mr. Winne has well earned the reputation of being one of the best feeders in the State, of which some stock yet to come to market will be conclusive evidence. The 100 alluded to were sold by McGraw & O'Brien, as follows: 3 to W. Lalor, $51; 20 to B. Lawrence, at 7¼c. per lb., live weight, or $235.72; 55 to M. Tabin, $643.62; and 22, scattering, for $264, making a total of $1,194.34, or an average of $11.94 each. The 20 sold to B. Lawrence weighed 157 lbs. each.

☞ "How to Cultivate and Preserve Celery," by Mr. THEOPHILUS ROESSLE of the Delavan House, is now ready. It is preceded by a preface, containing an account of the author's life, from the pen of HENRY S. OLCOTT. The price of the book is $1.

Mr. ROESSLE is very concise in his style, and 60 or 70 pages of large type, comprise the whole results of his experience with the celery plant. There is considerable in his instructions which will probably be novel to the gardener, and at first perhaps received with doubt. But coming as it does, from a man who has *proved* in long practice the correctness of what he writes, and who claims that equal success is attainable by any one who carefully follows the directions he gives, we can but regard this brochure as worth its price to any grower or lover of celery. It is illustrated, it should be added, with a number of Colored Plates, and comprises the care and treatment of both summer and winter crops of this vegetable.

ENLARGEMENT.—Our friend WM. THORBURN, whose seed store on the corner of Broadway and Maiden Lane, Albany, has been well known for twenty years or more, has found it necessary, from the increase of his business, to enlarge his borders, which he has done by annexing the the adjoining store. The partition having been removed and the two stores made into one, he has now a spacious establishment, well filled with all the varieties of seeds necessary for the farm and the garden. See his advertisements.

PLEURO-PNEUMONIA.—A communication having been lately received by the Royal Agricultural Society of England from the Central Society of Agriculture in Belgium, requesting information on Pleuro-pneumonia and the means adopted to combat the disease, having particular regard to the effects of inoculation—a reply was ordered to be made that inoculation was not found in Great Britain to rest on any scientific basis, and as such it has not received the sanction or support of the Royal Society.

TRIAL OF REAPERS, &C.—The Royal Agricultural Society of Holland propose to have an exhibition and trial of steam cultivators and reaping machines in August next, offering first and second prizes of about £30 and £15 in each class. These sums of course are not likely to tempt competition; but the probability of custom is. The level lands of Holland are particularly well adapted for both these machines.

☞ Mr. Edw. Elliott, of East Greenbush, has laid on our table some specimens of a seedling sweet apple without name. They were in good order, showing at least the possession of fine keeping qualities.

WHEAT FOR CATTLE FEEDING.—The London Agricultural Gazette, in answer to the inquiry—"which is the cheapest food for cattle—wheat, barley, oats, cake, maize or beans?—says:

"At the present prices the first of these is as economical as any. Wheat at 1*d.* per lb., is as cheap a food as can be bought—if we except some of the cheaper but still somewhat doubtful kinds of cattle cake. It is used by almost every cattle or sheep feeder we know; and even the game keeper knows nothing cheaper than the best wheat for his birds. These uses of it must enormously increase its consumption, and the low price which it maintains in spite of this unusual demand is as remarkable a thing in its way as is the high price of mutton in the face of the enormous supply of sheep weekly poured into the metropolitan market."

☞ An act of incorporation has recently passed the Legislature of Pennsylvania, for an association whose design it is to institute a "Model Farm," to be located probably in Chester, Delaware, or Montgomery county, including also a Botanic Garden, and opportunities, in connection with the Polytechnic College at Philadelphia, for the instruction of a limited number of Agricultural pupils. The Philadelphia Ledger states that "the list of corporators includes the names of some of the most energetic, respected aud wealthy citizens of the five south-eastern counties of the State, men of action, who never begin an enterprise which they do not carry through." The capital stock is fixed at $50,000, and it is thought such an establishment may be so managed as to be an interest-paying as well as a useful and practical institution.

GOOD CROP OF OATS—BENEFIT OF DRAINING.—Mr. ALBERT VAN VOAST, Pond Grove, Schenectady, believes in thorough draining, having carried it out on a large farm. He bought in 1858, eight and three-quarters acres of land adjoining his farm, which had been so run down, that it had not rented for years for more than a dollar an acre. He underdrained it thoroughly, and sowed it to oats last spring. His account with the crop is as follows:

OAT LOT—8¾ ACRES. DR.

To 9½ days team plowing, dragging, &c., @ $2.50	$21 25
" 2½ do. sowing, &c., @ 75c	1 88
" 24 bushels of oats for seed, @ 54c	12 96
" 28 days cradling, binding, &c., @ 75c	21 00
" 2 days, team drawing in barn	5 00
Interest on land at $700	49 00
Tax	4 00
Total	$114 09
Add threshing 550 bushels @ 3½ cents	19 25
do. for cleaning	5 00
Total	$138 34

CREDIT.

By 550 bushels, @ 40c	$220 00
" 9 tons straw @ $5	45 00
Total	$265 00
Deducting expenses	138 00
Profit	$127 00

Here is a clear profit of over $14 per acre, after deducting $7 per acre for rent, from land which before draining would not rent for more than $1 per acre.

CARELESS LETTER-WRITERS.—We lately received a letter from a subscriber, complaining that he had been cheated by a person who some time since advertised some seeds in this paper—that is, he had sent the required stamps, but had received no seeds in return. Knowing the advertiser to be an honest man, we sent our correspondent's letter to him, that he might explain the cause of the failure. In reply he says—"I have received over 300 letters since the publication of my advertisement in the COUNTRY GENTLEMAN, and in twelve of them the writer's name is wanting, and several of them no post-office or any thing else by which I could find out his residence, is given. I have now over 20 of these letters which I have been unable to answer, either for the want of the name or residence of the writers. These letters have given me a vast deal of trouble, and I wish you would try to impress upon your readers the necessity of giving their full address." Our advice to those who have sent stamps for seeds, and have not received them, is to write again, and be careful to give their names, post-office, county, and State.

OREGON TIMBER.—The trade in wood for 1859 at London, as reported in the Farmer's Magazine, shows the arrival there of four cargoes from Oregon and Vancouver's Isle—"magnificent trees," it is stated, "said to be *Abies Douglasii*—creating as much wonder in the naturalist as in the trade." Their chief purpose is for masts, for which it is added, they "combine all the qualities required, and have already attracted the attention" both of the British and other foreign governments—"in length from 100 to

130 feet; in diameter 30 to 39 inches throughout their length—straight, without knots, with scarcely any sap, sound, strong and not weighty."

☞ The Seventh Annual Report of the Secretary of the Massachusetts Board of Agriculture, for the year 1859, is at hand with commendable promptness. The attention of the Board during the past year, has been occupied chiefly in the collection of statistical and other information upon various subjects relating to agriculture, and the results of its investigations are embodied in the reports of the committees to which special topics were assigned, presented and accepted at the annual meeting in January. The Horticultural information contained in the report on general Fruit Culture, is interesting and useful. The reports of the Delegates to the various exhibitions of the county and other societies, are a valuable feature. An Appendix contains the general Statutes relating to Agriculture, recently passed or amended, including the Dog law, the law for the preservation of certain animals and birds, &c.

☞ Mr. E. W. Dennison, of 163 Washington-st., Boston, has sent us samples of Tree and Plant Labels manufactured by him in Wood and Zinc. There are four sizes in wood, so cheaply furnished as to make it an object for plant-growers and nurserymen to purchase instead of making them—the price being only from 40 to 62 cents *per thousand.* Of the zinc labels there are three sizes, intended to be attached by wire, and written upon with a chemical ink, a receipt for making which is given, or it can also be had ready made of Mr. D. The price of the zinc labels is from $2 to $3 per 1,000 only. Samples of the whole may be seen at this office.

Does Gypsum Serve to Fix Ammonia in Stables, &c.—Statements and recommendations, implying sometimes a positive and sometimes a negative answer to the above question, may be found in the columns of this paper. Some of our correspondents incline to one view, and others to the opposite one. One correspondent not long ago expressed himself as quite skeptical as to the property usually ascribed to gypsum when merely sprinkled in the dry state upon the floor of a stable or upon a manure heap, basing his doubts or disbelief upon the fact that while dry or undissolved, plaster can absorb but little or none at all, and that it requires about 500 parts (say ounces) of water to dissolve one part (ounce) of this substance.

While such diversity of opinion exists, perhaps no one will be acknowledged as competent to decide the question *with authority*, save some chemists of established character and skill. But meanwhile, the decision pronounced by the Editor of the *N. British Agriculturist* is worthy of consideration. He says—"It (gypsum) is found in practice not to be a good fixer of ammonia in stables, byres, &c."

☞ The editor of the Boston Cultivator has seen a part of the fat sheep fed by Jurian Winne in this county, and noticed lately in our columns. Our contemporary says that only 120 had then been slaughtered, the averaged dressed weight of which "was 96 lbs. each. We understand that Mr. Winne received for the lot, seven and one-eighth cents per pound, live weight—probably amounting to eleven or twelve dollars per head. They were unquestionably a very superior lot—some good judges say the best they have ever seen in this country."

Peas with Spring Rye.—One of my neighbors has always made it a practice to sow peas with spring rye. One gives support to the other, and the rye keeps the peas from lodging, they then being less liable to mildew. When harvested and threshed they can be easily separated, and thus two crops are secured in one season from one piece of ground, with very little extra labor. S.

Millet for Milch Cows.—Elijah Wood, Jr., of Concord, Mass., who has been for twenty years in the milk business, said (as reported in the N. E. Farmer,) at a recent agricultural meeting in Boston, "If I can attribute my success to any one crop, it is millet. I first cut two tons of millet, and soon increased it to twenty tons. * * Millet is not so good as English hay, but is worth two-thirds or three-fourths as much." He sows a peck of seed to the acre. Mr. W. commenced with four cows, but in fifteen years kept twenty-four cows on the same farm, and is now keeping 80 head of cattle, having leased another farm.

Large Hogs.—Having lately sent you an account of a few crosses of large, heavy, fat hogs made by some of our Burlington county farmers this year, I now send you the account of six hogs fed and killed by Benj. White, near Jacksonville, of this county—*one each year in six successive years*—viz:

In 1847,	Weight	606	pounds.
1848,	"	587	"
1849,	"	823	"
1850,	"	837	"
1851,	"	846	"
1852,	"	792	"

All net dressed weight—averaging 748½ pounds each.

Other instances of individual hogs of large weight might be given; but this being for six consecutive years, we think hard to be beaten. Watson Newbold.

Burlington Co., N. J.

Proper Depth of Planting Corn.—At a recent meeting of a Farmer's Club in Illinois, Mr. Waterbury read the following table, from the old *Prairie Farmer*, showing the time at which corn came up when planted at different depths, from one to six inches:

No. 1—1-inch corn came up in 8½ days.
2—1½-inch corn came up in 9½ days.
3—2-inch corn came up in 10 days.
4—2½-inch corn came up in 11½ days.
5—3-inch corn came up in 12 days.
6—3½-inch corn came up in 13 days.
7—4-inch corn came up in 12½ days.
8—4½-inch corn—
9—5-inch corn—
10—5½-inch corn came up in 17½ days.
11—6-inch corn—

Nos. 8, 9, and 11, were dug up after 22 days, and it was found that No. 8 had one inch more to grow to reach the surface; Nos. 9 and 11 had just sprouted, but were short, and were within three inches of the surface. No. 10 came up in 17½ days, but the tender leaf remained green only six days, and then withered. The more shallow the seed was covered by the earth, the more rapidly the sprout made its appearance, and the stronger afterwards the stalk.

Mr. Waterbury said his experience taught him that three-quarters of an inch was the best depth. He would step on the hill after planting; this would pack the ground, and the dews would keep it moist.

At a meeting of the trustees, held on the 13th April, Rev. Dr. J. W. Scott, late President of Washington College, Pa., was elected President of the Maryland State Agricultural College.

Sprouting Seed Potatoes.—The Rural New-Yorker gives an account of some experiments with potatoes, showing that "from a whole potato, as a general rule, only from two to four of the strongest eyes grew, the others remaining dormant—the eyes obtaining the first start appearing to have exhausted the nutriment in the potato before those slower in growing had got ready to claim their share. The same potato cut in two, three, or even four pieces, would give about the same number of shoots to each set, though the smaller the sets the weaker were the shoots. To these rules there were some exceptions, for occasionally most of the eyes in a whole potato would commence growth about the same time, and a good many small shoots would be the result, while sometimes a very small set would give one or two strong shoots."

English Farming.—The Detroit *Tribune* copies the published report of the second lecture on English Agriculture, delivered at the recent Yale Course by one of the editors of this paper, prefacing an extended editorial notice with the following paragraph:

We have before remarked that of all the Agricultural tourists and "commissioners" who have crossed the Atlantic for the purpose of studying European Agriculture, L. H. Tucker appears to have taken the best course for deriving benefit from the excursion. He has visited the best agricultural districts of Great Britain, Ireland and France, also the principal exhibitions or cattle shows and the most celebrated farmers, and held a "big talk" with men whose practical knowledge of productive farming is beyond question. When the valuable information which Mr. Tucker has acquired, is diffused far and wide through the large circulation of the *Country Gen-*

tleman, of which he is one of the editors and proprietors, a vast amount of good will be conferred on the farming community.

PEA-NUTS.—"The pea-nuts may be sown in Virginia and more south, from April to May, and more north or west one month later; it is necessary to have the ground plowed, and drills made one foot broad and the hills six inches high, all parallel. It is on the top of these hills that the pea-nut seeds are put from one to two inches deep and from six to eight inches apart. When the plant begins to grow they are hoed and hilled—this operation is renewed when the seed is formed, and would be injurious in the time of blossoming; the ground must be kept clear of weeds."

AGRICULTURAL SOCIETIES.

☞ THE KENTUCKY STATE AG. SOCIETY are to hold two Tobacco Fairs in May—one at Paducah on the 9th, and the other at Louisville on the 16th. At these Fairs over $2,000 is to be paid in premiums on Tobacco. Their regular State Fair is to be held near Bowling Green, commencing Sept. 18, and continuing five days. R. W. SCOTT, Esq., Frankfort, is the Secretary, to whom communications may be addressed.

☞ The next State Fair of Illinois is to be held at Jacksonville, beginning on the 10th and closing on the 15th of September. A premium of one thousand dollars is offered for the best steam plow.

INDIANA STATE FAIR.—I notice in the last number of the Journal of the N. Y. State Ag. Society, an erroneous announcement of the time of our State Fair. The Indiana State Fair will be held at Indianapolis, commencing on Monday, the 15th Oct., and continue during the week. We are fitting up new grounds of over thirty acres, with new structures and greatly improved general arrangements. Our Premium List of *Twelve Thousand Dollars Cash*, embraces Four premiums on Stock of $200 each, Ten on Stock, Farms and Machinery, of $100 each, and some thirty or forty premiums of $50 each, being nearly double the amount ever given before. W. T. DENNIS,
Sec'y Ind. State Board.

☞ The 10th Annual Fair of the PUTNAM CO. AG. SOCIETY, will be held at Brewster's, on the 25th, 26th and 27th days of September, 1860, (Tuesday, Wednesday and Thursday.) The officers of the Society are,

President—CHAUNCY R. WEEKS, Carmel.
Secretary—G. Mortimer Belden, Carmel.
Treasurer—Saxton Smith, Putnam Valley, and six Vice Presidents.

OFFICERS OF THE ONTARIO CO. AG. SOCIETY FOR 1860:

President—WILLIAM S. CLARK, Victor.
Vice-Presidents—Wm. G. Donelson, Bristol; C. Edward Shepherd, Canandaigua; Theodore Sprague, E. Bloomfield; Lindley W. Smith, Farmington; John Robinson, Gorham; John H. Benham, Hopewell; Sanford G. Angevine, Manchester; Lester Sprague, Naples; David E. Hamilton, Richmond; Wm. Johnson, Seneca; Shotwell Powell, South Bristol; J. H. Boughton, Victor; Hiram Taft, W. Bloomfield; Joshua Swan, Canadice.
Cor. Secretary—Gideon Granger, Canandaigua.
Rec. Secretary—John W. Holberton, do.
Treasurer—George Gorham, do.
Town Committees of three from each town in the county.

NIAGARA CO. AG. SOCIETY.—I send you a list of the officers of the Niagara Co. Ag. Society for 1860:

President—FRANKLIN SPALDING, Lewiston.
Vice President—O. P. Knapp, Lockport.
Treasurer—E. A. Hall, do.
Secretary—P. D. Walter, do.
Directors—D. A. Van Valkenburgh, Lockport; Philip Freeman, Royalton; Wm. Robinson, Lockport; Thos. Scovel, Cambria; A. Campbell, Newfane; D. Basserman, Lockport.

The Society have, for several years past, held a Fair and Show in the spring, for the exhibition of stock animals, that the farmers may have a better opportunity for selecting such as they would prefer to breed from—also for the sale of stock, seeds, implements, &c., &c. This year the spring Show will be held at Lockport on the 3d of May. K.

☞ The Onondaga County Fair is to be held at Syracuse, Sept. 26, 27 and 28.

☞ The second Annual Fair and Cattle Show of the Afton Agricultural Society, will be held at the village of Afton, Chenango Co., on the 12th and 13th of Sept. next.

STEEL PLOWS.

STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular, SAYRE & REMINGTON.
Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

NANSEMOND SWEET POTATO PLANTS,

Of superior quality, packed to go long distances safely, by Express: 400, $1: 1000, $2; 5000, $9; 10,000, $15—during May and June. Our Plants have produced fine crops in the North for many years, even as high as 44°.

Circular of directions in culture, and experience of our patrons, sent for a stamp. C. B. MURRAY,
(late O. S. Murray & Son,)
Foster's Crossings,
Mar 29—weowtf | May 1m1t Warren Co., Ohio.

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address WM. LAWTON, New Rochelle, N. Y.

☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

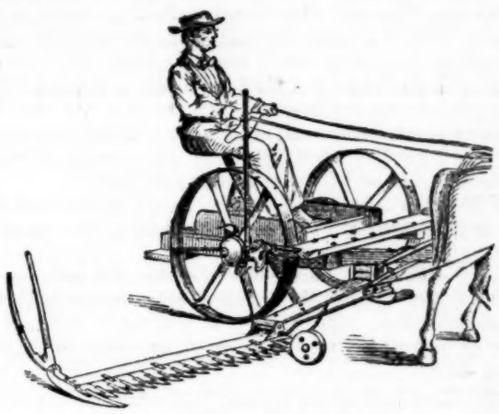
BUCKEYE PREMIUM MOWER.

WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower, will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD.

together with several important improvements added the present season.



AS IT APPEARS IN THE FIELD.

The machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left.

The cutter bar is attached to the frame by a DOUBLE HINGE JOINT, which allows either end to rise or fall without affecting the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the machine.

WHEN NOT IN USE THE CUTTERS CAN BE INSTANTLY FOLDED OVER THE FRONT OF THE FRAME, RENDERING THE MACHINE AS PORTABLE AS A COMMON CART.

One of the strongest proofs of the great success of the Buckeye Mower, is found in the fact that, since its introduction, so many other machine manufacturers have changed the construction of their own machines, and introduced features in IMITATION of the BUCKEYE. These imitations are all necessarily failures, as the desired advantages cannot be attained without infringing the Buckeye Patents.

The DOUBLE JOINTED, FLEXIBLE BAR, BELONGS EXCLUSIVELY TO THE BUCKEYE MOWER, AND IS SECURED BY THE PATENTS OF SYLLA & ADAMS, AND AULTMAN & MILLER, WHICH PATENTS WILL BE FULLY SUSTAINED AGAINST ALL INFRINGEMENTS.

The greatest care will be taken in the selection of material, and the construction of the Machine, and the Buckeye of 1860 will present more claims than ever before, to the consideration of the farmer wishing to secure the best Mowing Machine.

Orders must be sent early to Secure Machines. My unfilled orders of last season amounted to several hundred. Descriptive Circular, with testimonials, forwarded by mail.

JOHN P. ADRIANCE, Manufacturer and Proprietor,
Poughkeepsie, N. Y. and Worcester, Mass.
Warehouse 165 Greenwich St., near Courtland, New-York.
SCHOONMAKER & JOHNSON, Agents,
Coeymans, Albany Co., N. Y.
JAS. WALKER & CO., Agents,
April 26—w&mtf. Schenectady, N. Y.

THOROUGH-BRED NORTH DEVONS.

EUGENIA, (——) 3 yrs. old, with Bull Calf by "Young Comet" by her side.
VICTORINE, (——) to calve in May—served by imported Duke of Devonshire.
Two young DEVON BULLS, imported sire.
AYRSHIRES and ALDERNEYS, male and female.
ALFRED M. TREDWELL,
45 Fulton st., New-York.
☞ Residence—Madison, Morris Co., N. J. Ap 19—w4tm1t

EUROPEAN POTATOES.

I received, two years since, from the Seedsman to the Imperial Agricultural Society of France, a collection of ONE HUNDRED VARIETIES OF POTATOES, selected as the BEST, from upwards of Five Hundred varieties, collected from all parts of the world, and cultivated by that Society for the purpose of testing their quality. This collection has been carefully cultivated during the past two seasons, and specimens exhibited at some of our State and County Fairs, which have attracted much attention. From these, SEVENTY-FIVE VARIETIES have been selected, which for their productiveness, fine flavor, and freedom from disease, can be recommended as every way desirable for general cultivation.

For the purpose of introducing as extensively as possible, I have put them up in collections as follows, which can be sent by Express to any part of the country:

75 varieties, 3 potatoes each, each sort distinctly labeled,... $5.00
50 " 10 " " " " ... 4.00
25 " 20 " " " " ... 3.00

Also Davis Seedlings and Dovers at $1 per bushel. Orders must be accompanied with cash. Address B. K. BLISS,
Springfield, Mass.
Ap 19—w4tm1t

OSIER WILLOW CUTTINGS—

The best variety for market and for live fence, (Salix purpurea)—price $3 per 1000. By mail, postpaid, for experiment, $1 per 100.
D. L. HALSEY,
Mar 15—w7tm2t Victory, Cayuga Co., N. Y.

CRANBERRY PLANTS

of the best known varieties, grown on upland and on lowland. Price $6 per 1000. By mail, postpaid, $1 per 100.
D. L. HALSEY,
Mar 22—w7tm2t Victory, Cayuga Co., N. Y.

MARBLEHEAD DRUMHEAD.

This Cabbage is by far the most popular and profitable kind sold in Boston Market. It originated in Marblehead, Mass., and holds the same rank among cabbages as the Hubbard squash among squashes, being distinguished for its reliability for setting a symmetrical head remarkably hard and heavy. It is early, very fine grained and sweet, with a stump, when properly cultivated, of but one to two inches in length. Under fair cabbage culture, ninety-five per cent. will set good heads to the acre; under good culture, frequently every plant on an acre will set a marketable head. A package of the best variety of this cabbage, the Stone Mason, containing seed more than sufficient to raise a winter's supply for one family, forwarded post-paid to any part of the United States for 25 cents. One pound of seed forwarded post-paid on the receipt of $4, or for $3 to parties paying their own freight. I aim to introduce no product new to the public that will not be a full return for the money they invest. I will give five dollars to any person for one ounce of seed of any Drumhead Cabbage, that will excel this variety. JAMES J. H. GREGORY,
Mar 29—w7tm2t Marblehead, Mass.

COUNTRY RESIDENCE AND VALUABLE FARM FOR SALE,

Known as the "COLDEN MANSION FARM," situated in Coldenham, Orange Co., N. Y., 7 miles west of Newburgh, on the Newburgh and Cochecton Turnpike.

The House is 50 feet square, two stories high, basement kitchen, and built of stone. There is a large Farm House and Tenant House also on the place, together with Carriage Houses, Barn, Hay Houses, Granary, &c., &c. A fine Apple Orchard—also a great variety of the choicest kinds of Fruit Trees in full bearing.

The Farm contains 217 acres, mostly under a high state of cultivation, and is as healthy a location as can be found.

At least one-half of the purchase money may remain on bond and mortgage for a term of years.

For further particulars apply to Judge JOHN J. MONELL, Newburgh, L. MURRAY FERRIS, jr., 62 South street, New-York, or to the subscriber on the premises. LINDLEY M. FERRIS.
Mar 8—w7tm2t

NORTH RIVER AGRICULTURAL WAREHOUSE AND SEED STORE, 60 Courtland Street, New-York City.

Farmers and Dealers will find it to their advantage to give us a call before purchasing their

IMPLEMENTS OR FERTILIZERS.

Our motto has ever been and still is to furnish the BEST ARTICLES at the LOWEST PRICES.

Our IMPLEMENTS are of the most improved patterns. Our

GARDEN AND FIELD SEEDS

Are selected from RELIABLE GROWERS.

Our stock of FERTILIZERS comprises the following:

No. 1 Peruvian Guano, warranted pure.
"Hoyt's" Superphosphate of Lime, the best in the market.
Poudrette, manufactured by the Lodi Manufacturing Company.
Blood and Wool Manure, $25 per ton.
Bone Sawings, Turnings and Ground Bone.
Land Plaster &c.

We will furnish DEALERS with any of the above Fertilizers in quantities to suit at the lowest rates. GRIFFING, BROTHERS & CO.,
Feb. 9—w&m3mos. Proprietors.

ALL KINDS OF AGRICULTURAL BOOKS.

Farmers, Gardeners, Nurserymen, Fruit-growers, Dairymen, Cattle Dealers, and all persons interested in tilling the soil or adorning their grounds and dwellings, will be supplied with the most complete assortment of Books relating to their business that can be found in the world, by

C. M. SAXTON, BARKER & CO.,
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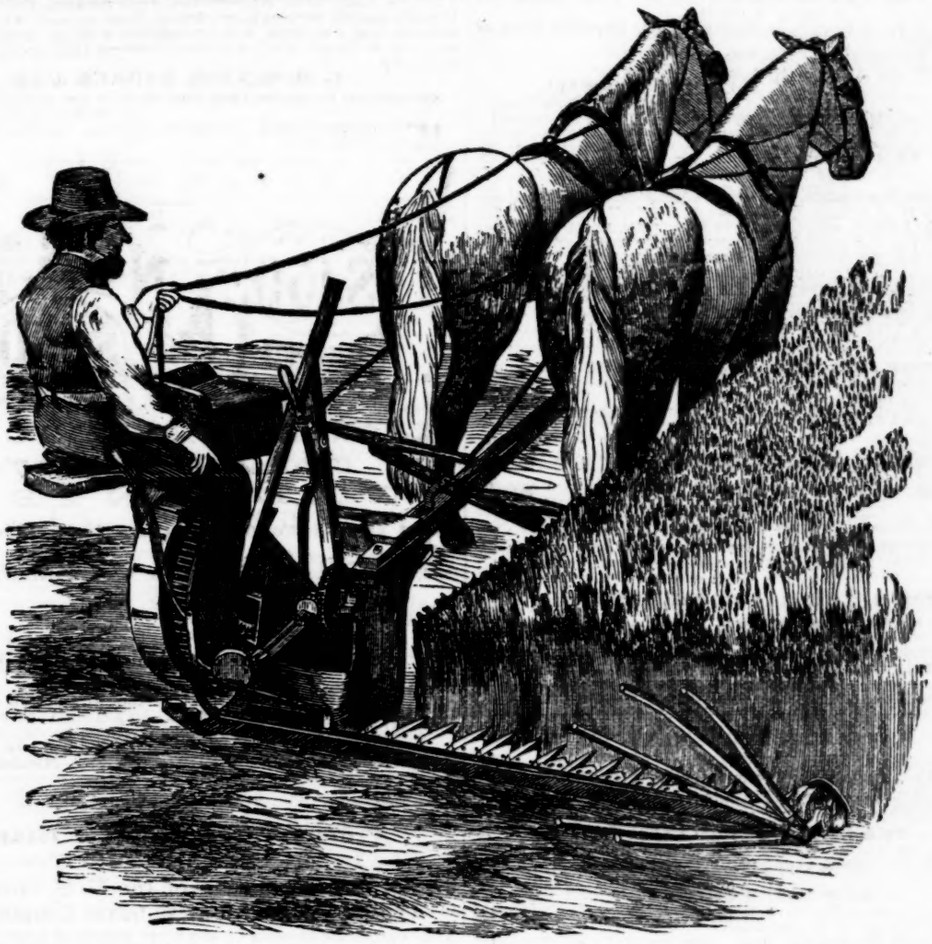

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GLENVILLE, Schenectady Co., N. Y., Sept. 26, 1859.

GENTLEMEN—I have used one of Kirby's American Harvesters two seasons, and am perfectly satisfied that in respect to durability, lightness of draft, ease of management and quality of work, it is surpassed by no other machine with which I am acquainted, either as a mower or reaper, and there are a number of different machines in the neighborhood. I have used it on both smooth and rough ground, and am satified there is no machine before the public which, for lightness of draft, amount of work, and ability to keep the surface of the ground, through ditches and over stones, free from side draft, comfortable position for the driver and raker, workmanlike manner in which the grass and grain are cut and laid, and durability, all considered, combine so many advantages as this machine; therefore I cheerfully recommend it above all others, to any farmer who wishes a machine.

Yours, DANIEL KNAPP.

To D. M. OSBORNE & Co.

CANAJOHARIE, Feb. 21, 1860.

MESSRS. B. & A. SMITH: Gents—I have used your Kirby American Harvester the past season with entire satisfaction, both as a Mower and Reaper. I have cut lodged clover around the piece, cutting it the way it was lodged, shorter stubble than my neighbors did with the Hallenbeck machine, cutting against the lodge. I am satisfied I did much better work than I could have done with the scythe or any other machine that I have used. As a Reaper, I do not think it has an equal; it reaps perfectly, cutting all of the grain and delivering it so it will dry about as well as from the cradle. I am satisfied a farmer will save enough with it from his farm in one year, more than he could with the cradle, to pay the price of the reaper attachment. Its independent action of the driving-wheel, allowing it to be in a dead furrow, and passing over obstructions without interfering with the cutter-bar, so it cuts a uniform height of stubble, is a great superiority over all other machines I have knowledge of. In lightness of draft, and freeness of side draft, it has no equal, and the perfect control the driver in his seat has over the machine, makes it the most desirable machine in the market; and I can cheerfully recommend my friends in want of a machine, to buy the Kirby American Harvester, and to buy the combined machine; for a farmer is short-sighted to buy a machine that will do but half of his work, when for a little extra he can get one to do all. EDWIN WILLIAMS.

MINDEN, Montgomery Co., N. Y., Jan. 24, 1860.

MESSRS. B. & A. SMITH: Gents—The Kirby American Harvester that I bought of you this season, has given me entire satisfaction. I consider it by far the best Machine in use in this section, and I am familiar with most of the prominent Machines. I have used a Ketchum Machine for six years, and sold it this summer. I decided to try the Kirby, because I consider it by much the best Machine in lightness of draft and its adaptation to uneven surfaces. I know of no Machine that will in any way equal it. It works perfectly as a Reaper. I reaped all my grain with it. I would recommend it as fully for reaping as mowing. I am at a loss to understand why a farmer will buy a machine that will mow only, when he can get one that will do the whole work. You have but to get a farmer to try the Kirby, and he is sure to buy it. Yours respectfully. H. C. SANDERS.

The undersigned, having used Mr. Sanders' Kirby Machine, and seen it at work, join with him in recommending it to the public as a very perfect and desirable Machine, and would say that it is far ahead as a Mower and Reaper to any other machine in this section.

JACOB SANDERS.
S. F. SMITH.
Jan. 24, 1860. JACOB P. BELLINGER.

FISHKILL, Duchess Co., N. Y., Jan. 1, 1860.

D. M. OSBORNE & Co.: Gents—The Kirby Machine I bought of your agent at Poughkeepsie, works to a charm—it suits me exactly. As a Mower, I found the draft light, very easy for two horses; there is no weight on the necks of the horses, and very little side draft. I can mow an acre of grass an hour with ease. For simplicity, durability, and strength, the Machine is superior to any I ever saw. I cut twenty-five acres grass over smooth, rough and uneven ground, and it travels over small ditches without any difficulty. The independent action of the finger bar I consider a decided improvement; it makes the machine better aeapted to rough, uneven ground. Keep the knives sharp, and there will be no difficulty in mowing any kind of grass, either coarse or fine. I consider the Kirby Machine preferable to any other I have seen, and would cheerfully recommend it to any that need one. Yours, &c., SYLVESTER TOWNSEND.

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